

1 IN THE UNITED STATES DISTRICT COURT

2 FOR THE DISTRICT OF OREGON

3 UNITED STATES OF AMERICA,)

4 Plaintiff,)

5 v.) 6:10-cr-60066-HO-1-2

6 STEVEN DWIGHT HAMMOND,)

7 DWIGHT LINCOLN HAMMOND, JR.,)

8 Defendants.)

9 TRANSCRIPT OF TRIAL PROCEEDINGS

10 BEFORE THE HONORABLE MICHAEL R. HOGAN

11 UNITED STATES DISTRICT COURT JUDGE, AND A JURY

12 WEDNESDAY, JUNE 20, 2012

13 PENDLETON, OREGON

14 DAY 7 A.M. SESSION - PAGES 1573 - 1708

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1 (Wednesday, June 20, 2012; 8:57 a.m.)

2 P R O C E E D I N G S

3 THE COURT: Are you ready to go?

4 MS. SGARLATA: Yes, Your Honor.

5 MR. MATASAR: The defense is ready.

6 THE COURT: Bring the jury in, please.

7 MS. SGARLATA: Judge, would you like the
8 witness to resume taking the stand?

9 THE COURT: Please take the stand. You are
10 still under your previous oath.

11 (Jury enters the courtroom at 8:58 a.m.)

12 THE COURT: Good morning, Jurors. Go ahead and
13 continue.

14 MS. SGARLATA: Thank you, Your Honor.

15 DIRECT EXAMINATION (continuing)

16 BY MS. SGARLATA:

17 Q. Ms. Bilbao, yesterday you testified that you
18 performed an origin and cause determination of what is
19 known as Ignitions 8 and 9 in the Grandad -- what is
20 called the Grandad Fires; is that correct?

21 A. That's correct.

22 Q. And I believe you were just about explaining to
23 us how you performed the methodology around Ignition
24 Number 8?

25 A. Correct.

1 Q. So to your left is Government Exhibit 69. Do
2 you recognize that exhibit?

3 A. Yes, I do.

4 Q. And do you see exhibit numbers on that
5 particular exhibit near the locations of Ignitions 8 and
6 9?

7 A. Yes.

8 Q. And can you tell us what those exhibit numbers
9 refer to?

10 A. They refer to some of the photographs and scene
11 sketches that I picked for the -- for this trial,
12 basically.

13 Q. And the photographs in questions were ones you
14 took yourself?

15 A. Yes.

16 Q. I would ask Ms. Root to bring up Government
17 Exhibit 146, please. Now, do you recognize this?

18 A. Yes.

19 Q. Can you tell us what we're seeing here?

20 A. This is the first photo that I took of Ignition
21 8 when I arrived on scene. And this is where -- the
22 green flags represent the boot prints that -- where
23 Lance had seen Dwight Hammond crossing the road.

24 There were really no tracks there
25 distinguishable at that time. You could kind of see an

1 impression. But he had marked some of those tracks. He
2 had marked the area where he saw him cross the road.

3 And then back in the distance he had marked a
4 tree where he saw the fire.

5 Q. And can you bring up, please, Ms. Root, Exhibit
6 147. Do you recognize this?

7 A. Yes.

8 Q. And is this also the area of Ignition Number 8?

9 A. Yes, it is.

10 Q. Can you tell us what we're seeing in this
11 picture?

12 A. The blue flags mark the backing indicators from
13 Ignition 8. Over to the right here, more -- hard to
14 distinguish, but there is again some flagging on some
15 brush. There was some other flagging of some general
16 foot tracks in the area.

17 The red indicator flags mark advancing
18 indicators. And then I actually marked some of the
19 indicators, like the types of indicators they were, with
20 the markings of -- you know, 1 through -- I can't
21 remember. I think I picked nine out on this fire to
22 describe what type of indicators they were at the scene.

23 And in this particular area, you see a lot of
24 grass still left. And then as it starts taking off,
25 more is burned as it starts advancing away.

1 Q. Okay. And I'd ask Ms. Root to bring up
2 Exhibit 149, please. Can you tell us what we're seeing
3 in this exhibit?

4 A. Yeah, this is the looking directly at the
5 origin area in here. Again, a footprint marked over
6 here. This is where I found the -- maybe the -- more of
7 the point of origin. Couldn't find an exact ignition
8 source in the origin area. But that's the general
9 location of it and it takes off from there.

10 Q. And what do you mean when you say you couldn't
11 find the exact ignition source in the ignition area?

12 A. There was no ignition source or device found in
13 the origin.

14 Q. And what would be an example of an ignition
15 device?

16 A. Like a device -- if you are looking at an arson
17 device, it may be a cigarette match, or a match, you
18 could find matches, you could find cigarettes left at
19 the scene.

20 There is other kinds of things that you would
21 find for different kinds of starts if it's not arson.
22 You know, pieces of metal or carbon particles if it's
23 from exhaust systems or catalytic -- I mean, there's a
24 lot of different things you look for.

25 Q. So did you consider the possibility that this

1 particular fire was caused by some of those other things
2 such as exhaust?

3 A. Well, you have to take into consideration all
4 the different types of causes when you are going to a
5 wildland fire. There are things that could cause a
6 fire. And then you look at the indicators at the scene,
7 what you have.

8 This -- I think it was about 464 feet from the
9 road, so you could pretty much eliminate vehicles. If
10 somebody was driving off-road, you see it's pretty
11 brushy, it would be hard to drive out there. Plus,
12 you'd have tracks in the area.

13 There was no, like -- things like saws or
14 equipment in the area. You'd find stuff like that. If
15 somebody was sawing, you'd see sawdust marks. You'd see
16 that kind of thing. So you just go through that list
17 and you rule out all other possible causes.

18 Q. Can you remind us again how many
19 investigations, fire origin and cause have you
20 performed?

21 A. Well over 800.

22 Q. I'd ask Ms. Root to pull up Exhibit 150,
23 please.

24 Do you recognize this photograph?

25 A. Yes. This is the same fire just looking at the

1 opposite direction. And if you notice from the previous
2 photograph, how much more green it looked like looking
3 out towards the fire, the direction the fire was
4 burning, which was coming out this direction. When you
5 look back this way, it's -- you can see the more
6 advancing indicators.

7 And then I'll also point out, like, on this
8 side, if you're wondering why that's darker, I mean, it
9 should be -- if it's backing, it should be a little
10 greener and more vegetation.

11 So Fire Number 9 was across the road, crossed
12 the road and burned into Number 8.

13 Q. So the fire, do you mean Ignition Number 9?

14 A. Uh-huh.

15 Q. And you said crossed the road into the area of
16 Ignition Number 8?

17 A. Yes.

18 Q. And you were able to determine that how?

19 A. By looking at the burn pattern indicators.

20 Q. And can you give us an example of some of the
21 burn pattern indicators you saw at Ignition 8?

22 A. At 8, for the backing, grass stem, a little bit
23 of die-out back in here. There was a good V pattern for
24 the macro indicator coming out of this area. We looked
25 at angle of char, and some of the cupping, degree of

1 damage, protection.

2 Q. Okay. Now, you are an origin and cause
3 investigator. You're not a dendrologist, correct?

4 A. No.

5 Q. Nevertheless, are you aware of what kind of
6 tree we're seeing in the picture here?

7 A. Yes, it's a juniper tree.

8 Q. Thank you. Directing your attention to
9 Ignition Number 9. I'd ask Ms. Root to pull up the --
10 on the monitor the same exhibit, I believe it's Number
11 69.

12 Can you -- using the laser pointer -- show
13 us -- just explain for us the approximate distance
14 between Ignitions 8 and 9.

15 A. Well, this area measured -- I took a measuring
16 wheel and measured the distance from the road to the
17 Ignition Number 8, which is around approximately 464,
18 that number sticks in my mind. And then from the road
19 down -- from the road down to Ignition 9, it was -- I
20 think it was over 1000 feet.

21 Q. And regarding Ignition Number 9, I'd ask
22 Ms. Root to pull up Exhibit 159, please. Do you
23 recognize this?

24 A. Yes.

25 Q. Is this a photograph that you took as well?

1 A. Yes.

2 Q. What are we seeing here?

3 A. This is a photograph of a foot track found in
4 Number 9 just below the point of confrontation or the
5 point -- an area where Lance Okeson confronted
6 Mr. Hammond.

7 Below that we followed some foot tracks out.
8 You could see the foot impressions pretty clear in some
9 of the areas, not so clear in others. It was kind of
10 rocky in some of the areas, a little more grassy in
11 other areas. But this one still remained pretty well
12 intact. We marked it with the double flag just to kind
13 of make it stand out a little bit more from a distance
14 when you are looking at it.

15 And then you can see the heel is a pretty good
16 heel impression. The toe, you kind of lose a little bit
17 out here. So it's hard to tell exactly how long it is,
18 but you can definitely see the impression of the shoe.

19 Q. Now, do you recall what kind of shoes you were
20 wearing during this investigation?

21 A. Yes, I have a White type firefighting standard
22 firefighting boot.

23 Q. What kind of bottom is there to that shoe?

24 A. A Vibram sole.

25 Q. What does that mean?

1 A. That is -- well, all firefighters are required
2 to wear certain personal protective equipment. And
3 boots are one of the requirements. Leather, have to be
4 leather, eight inches tall, with a Vibram sole, which is
5 supposed to be a little more fire resistant. And it's
6 kind of a lug sole. And it's more durable than some of
7 the regular hiking boots.

8 Q. When you say a "lug sole," is it a smooth sole?

9 A. No.

10 Q. I'd ask Ms. Root to bring up Government Exhibit
11 163, please. Do you recognize this photograph?

12 A. Yes.

13 Q. Is this one that you took as well?

14 A. Yes.

15 Q. Can you tell us what we're seeing here?

16 A. Yeah. We are looking towards the origin of
17 start number -- Ignition Number 9, which is down in this
18 area under this juniper tree here. And this is after we
19 had marked the burn pattern indicators. And then
20 actually on this one, I did work with John Bird on this.
21 So we went through and marked the indicators. And red
22 meaning advancing; blue, backing; yellow, flanking or
23 lateral. And then the white were marked here were
24 actually foot tracks that we could see pretty well in
25 this origin.

1 Q. Now, did you cast any of these foot tracks?

2 A. No, we did not.

3 Q. Why not?

4 A. For one reason, we didn't have the material
5 with us. For another reason, there wasn't really a good
6 print -- a casting type print.

7 In order to get a good cast, you need a really
8 good print. I mean, otherwise you are not going to
9 have -- I mean, it's not going to really buy you much as
10 far as a photograph. A lot of the things can go wrong
11 in casting, too.

12 You have to get the mix just right when you
13 cast. If it's lumpy, you could blow out the foot track.

14 So sometimes photographs, especially if they're
15 partial, they're just as good in my experience.

16 Also, casting -- if you are not -- if you don't
17 have anything to compare it with like a photograph, it's
18 not going to really tell you the size, per se, or
19 anything like that. It could show you the
20 characteristics of the foot track, but you do need a
21 good print for that.

22 Q. Now, have you casted footprints in the past?

23 A. Yes.

24 Q. Approximately how many times?

25 A. Probably just a couple times. We did on an

1 arson case a couple years ago. And I actually just got
2 done with a case where we casted a footprint a couple of
3 weeks ago.

4 Q. Okay. And I'd ask Ms. Root to pull up
5 Government Exhibit 164, please. Do you recognize this
6 photograph?

7 A. Yeah. This is just another angle of Ignition
8 Number 9 looking -- the other photograph was taken from
9 this area over here looking this way. This is on this
10 side looking this way. And there's a little cattle --
11 cow trail right here (indicating).

12 Q. Do you see in the upper region of this
13 photograph right in the center, in the tree area, it
14 appears -- can you explain to us what we're seeing here.
15 Why some of the trees look different from some of the
16 others?

17 A. Well, this is where the fire started advancing
18 a little bit more. You can see on this, there's
19 vegetation left on the brush; whereas, this, more of the
20 vegetation is taken out of the brush.

21 Same with behind where it's backing away from
22 the fire, it's a cooler burn behind it.

23 Q. And I'd ask Ms. Root to pull up Exhibit 165,
24 please. Can you tell us what we're seeing in this
25 photograph?

1 A. This is looking at the origin, again, on the
2 other side of the tree. And you can see all the
3 vegetation that's left. There is more backing
4 indicators behind it, and it kind of dies out behind it.

5 Q. How come -- were you able to examine or look at
6 this tree here in the center of the photograph and had
7 this tree -- did it appear to have been contacted by
8 fire at some point?

9 A. It does out of the front. Could have been more
10 vegetation right here that caught it, just when the fire
11 first ignited, taking out more of the tree here
12 (indicating).

13 Q. Okay. And I'd ask Ms. Root to pull up
14 Government Exhibit 166, please. Can you tell us what
15 we're seeing in this photograph?

16 A. This is another photo of Ignition 9, more
17 getting towards the point of origin. The foot tracks
18 are marked. We found four pretty distinct ones going
19 into the area where we think the fire started.

20 Q. Okay. And you didn't cast those either, did
21 you?

22 A. No. These -- they were kind of some -- some
23 partials you can make out the print. There was a couple
24 that were more in grass, which when you step on grass,
25 it'll leave an impression sometimes and compressed fuel,

1 basically. When it burned over, you could still see a
2 little bit of the outline of the footprint, but not good
3 enough to cast.

4 I think if you tried to cast in grass, you
5 would just blow out all the grass because it's already
6 burned.

7 Q. Okay. And I'd ask Ms. Root to pull up
8 Government Exhibit 168, please. Do you recognize this
9 photograph?

10 A. Yes.

11 Q. Is this a photograph that you took as well?

12 A. Yes.

13 Q. Can you tell us what we're seeing here.

14 A. Yes. This is one of those foot impressions,
15 you can make out the edge of it. Heel probably
16 somewhere in here.

17 Out here, it's kind of hard to see exactly, but
18 there is definitely an impression of a side of a foot
19 where the grass was compressed prior to the fire burning
20 there.

21 Q. Was this your ruler that you were using in the
22 photograph here?

23 A. Yes.

24 Q. Okay. Now, you mentioned when we were talking
25 about Ignition Number 8 that the Ignitions Number 8 and

1 9 burned together in some way. Can you explain for us
2 how you are able to tell that that happened?

3 A. Ignition 8 right here (indicating) -- can the
4 jury see that?

5 Q. We can bring it up on the screen here so they
6 can see it.

7 A. Ignition 8 right over here, it looked like it
8 started, just as Lance had said, he saw the --
9 Mr. Dwight Hammond leaving that area, fire starting,
10 confronted him across the road, talked to him somewhere
11 in here, or I guess down here. And then afterwards, a
12 fire started below that. So as the fire progressed and
13 got larger, it built up more heat. It's burning hotter.
14 It's moving quicker up this slope. So there is a slight
15 slope here. And hitting this road pretty hard.

16 This fire is already going. And then the
17 advancing fire from Number 9 crossed the road and burned
18 into Number 8.

19 Q. Okay. And now did you come to a conclusion or
20 form an opinion as to the cause of Ignitions 8 and 9?

21 A. Yes.

22 Q. What was your conclusion?

23 A. We concluded that it was incendiary, arson set.

24 Q. All right. And did you consider the
25 possibility that it might have been something other than

1 an incendiary or arson set?

2 A. Yes.

3 Q. What other kinds of hypotheses did you
4 consider?

5 A. Well, you look at all the -- kind of the major
6 categories. Like I said before, lightning, was there
7 lightning in the area? There was prior to the 21st.
8 These -- from my understanding -- started on the 23rd or
9 were discovered on the 23rd. There was no lightning at
10 that time. There was no indicators of lightning in the
11 area, which, you know, especially with 8, you saw the
12 fuel types, they were lower to the ground. Then you
13 have that one juniper standing there. Usually lightning
14 strikes taller objects. But there was just no
15 indication of lightning.

16 Ruled out like any children, there is not a lot
17 of houses in the area, no playground, not a big,
18 populated area. So -- and, again, children tend to
19 leave things behind. You'll find smaller foot tracks,
20 that kind of thing.

21 No railroads. No power lines. No sign of
22 fireworks. No debris burning activity. That kind of
23 thing.

24 And then also it came into question whether or
25 not any of the firefighting activity or spotting, but

1 with the fire -- the main fire being the Grandad Fire at
2 the time it was -- it was like three miles to the west
3 of either of these ignitions. So it -- and from my
4 understanding, too, talking to some of the witnesses, it
5 was fairly inactive the morning that these started.

6 I know they did a burnout operation up here,
7 but that was, again, about two miles north of these
8 ignitions.

9 Q. Now, have you in the course of conducting your
10 800 or so origin and cause determinations, have you ever
11 seen an instance where it appeared that lightning had
12 struck the ground nearby?

13 A. Yes.

14 Q. And so you are familiar with what it might look
15 like?

16 A. Yes. I've seen it strike power poles, brush,
17 and the ground, and some trees in instances in the
18 forest.

19 Q. And you didn't see any indications of any of
20 that here?

21 A. No.

22 Q. Okay. Now, your conclusion as to the
23 incendiary cause, does that apply both to 8 and to 9?

24 A. Yes.

25 Q. Okay. And did you yourself interview

1 individuals, witnesses, in the area or did you rely on
2 reports from other people?

3 A. I interviewed Lance Okeson. I was at the scene
4 with him the first day I got to Ignition 8. I looked at
5 that. And then I can't say for sure -- I know I talked
6 to Joe Glascock at some point during that time.

7 Q. Okay. And did you also examine any of the
8 other or walk up to and look at any of the other
9 ignitions or Trail Fires in this area?

10 A. When I first arrived at the area, as part of
11 the briefing, we came in -- we came in through a road,
12 I'm not even really sure how we got there. There is a
13 road system out through here. We came in down this
14 road. And he was pointing out the other possible
15 ignition sites. But the ones that he wanted me to
16 concentrate on, because he was kind of working those,
17 were these two down here. Because he hadn't had a
18 chance to get to those yet. So I kind of reviewed where
19 they were at, but we didn't really, you know, go into
20 the origin and cause, per se.

21 Q. Okay. Did you consider the possibility that a
22 discarded cigarette might have caused some of these
23 ignitions?

24 A. Well, you look at it, but there is no
25 indication of any cigarette smoking activity in the

1 areas.

2 MS. SGARLATA: Okay. I have no further
3 questions.

4 THE COURT: Cross.

5 CROSS-EXAMINATION

6 BY MR. MATASAR:

7 Q. Ms. Bilbao, who worked with you -- I'm Larry
8 Matasar. I represent Dwight Hammond -- sorry, Steven
9 Hammond.

10 Who worked with you on Ignition Number 8 on the
11 investigation of that one?

12 A. On Ignition 8, I did the origin and cause, the
13 specific pattern indicators. Lynn Miracle gave me some
14 background, but not -- I was doing the specific origin
15 and cause.

16 Q. So you did it yourself?

17 A. Well, not completely by myself.

18 Q. Okay.

19 A. But I did -- yes.

20 Q. You were on the scene yourself?

21 A. Yes.

22 Q. Okay. And is it not the case that you're
23 supposed to have somebody with you when you are doing
24 this kind of investigation?

25 A. It's suggested, but it doesn't -- I've done a

1 couple of fire investigations this year without other
2 people present, but there's usually somebody in the
3 area.

4 Q. You are familiar with the Wildfire Cause and
5 Determination Handbook?

6 A. Yes.

7 Q. We've talked about that. You've spent a lot of
8 time working on it?

9 A. Yes.

10 Q. And you follow the methods in it?

11 A. Yes.

12 Q. Ever heard it called the "Bible" or the "fire
13 investigator Bible"?

14 A. No.

15 Q. What was the point of creating that book?

16 A. It was to give investigators kind of a
17 checklist. Like for me, it's helpful because I don't
18 do -- I don't conduct wildland fires year-round. In
19 some areas they do. But, you know, it's helpful to have
20 that checklist as a reminder of things to do, to help --
21 you know, in these certain situations, you look for
22 these indicators, or that kind of thing.

23 Q. And you're supposed to follow it, that's the
24 general idea?

25 A. It's a guideline.

1 Q. Do you have a kit that you take with you when
2 you go on -- when you are called to do an investigation?

3 A. Yes, I generally do.

4 Q. Do you have camera?

5 A. Yes.

6 Q. Do you have a ruler?

7 A. Yes.

8 Q. Golf tee, maybe?

9 A. Nope.

10 Q. Don't take a golf tee?

11 A. No.

12 Q. Why not?

13 A. We have other measurements of scale.

14 Q. Okay.

15 A. Like a ruler.

16 Q. But doesn't the book say that the -- when
17 you're taking a photograph, a golf tee performs a
18 different function than the ruler?

19 A. I'm not sure what it says. You'd have to read
20 that to me or I'd have to look at it. But it's for
21 shadowing effect or what you can get from different
22 lighting.

23 Q. Yes. So it sounds that that would be the kind
24 of thing that would be specifically in the book, is it
25 not?

1 A. Well, I know it's listed in the book as having
2 a suggestion to use a golf tee when you are
3 photographing, if you need to, but in a lot of cases,
4 you don't need to do that.

5 Q. Are you saying it says if you need to? Doesn't
6 it, in fact, say footwear and tire impression collection
7 procedures, insert a golf tee with a one-inch mark in an
8 upright position alongside the impression to provide
9 shadow correlation?

10 A. You can get shadowing effects from other ways.
11 You can set your camera and different lighting. Again,
12 it's a guidebook, it's a guideline, it doesn't -- it's
13 not "you have to do this" in order to get the photograph
14 taken.

15 Q. What about the dental stone, you say you don't
16 bring dental stone with you?

17 A. I have it in my investigation kit at home.

18 Q. But you didn't bring it with you this time?

19 A. I did not. I was coming off another fire, and
20 meeting up with Lynn. He provided me with a lot of the
21 investigation equipment I needed on scene that I did not
22 have with me.

23 Q. But not the dental stone?

24 A. Not the dental stone.

25 Q. Now, in this handbook is it fair to say there

1 are some things that are more important than others?

2 A. I suppose.

3 Q. And it uses bold print sometimes, does it not?

4 A. Yes.

5 Q. Okay. And isn't one of the things that's in
6 bold in the section on footwear and tire impressions
7 doesn't it usually -- doesn't it say specifically in
8 bold print, "shoe impressions should usually be cast"?

9 A. Should usually, so it's not a requirement to
10 get the job done.

11 Q. You did bring a measuring wheel?

12 A. Uh-huh. I don't know if it was mine or if I
13 brought it, but I had a measuring wheel.

14 Q. The BLM uses radios for -- used radios for
15 communication --

16 A. Yes.

17 Q. -- at this time? And cellular phones are not
18 really recommended; is that fair to say?

19 A. You can use cellular phones but not all the
20 time have the coverage, so.

21 Q. Well, the handbook says they are not
22 recommended?

23 A. Yeah.

24 Q. Okay. And is it a coverage question, is that
25 the reason?

1 A. I don't understand the --

2 Q. I mean, let me ask, what -- you are familiar
3 that -- you are aware that BLM used Bendix King radios
4 at this time?

5 A. I know some agencies did. I had an EF Johnson.

6 Q. Do you know what kind of radios BLM generally
7 used at this time?

8 A. I can't speak to the whole BLM. I know what we
9 had. We're EF Johnson at the time. And we did have
10 Bendix Kings prior to that. But I don't know what every
11 other agency was using across the BLM.

12 Q. Do you remember testifying at a previous
13 hearing in this case?

14 A. Yes.

15 Q. Do you remember Mr. Blackman, I think, asked
16 you just this question and you gave this answer: "Do
17 you know what kind of radios BLM used generally at that
18 time?"

19 A. Probably Bendix Kings, but I'm saying I can't
20 speak for all the agencies. I know we had them for a
21 while, then we switched to EF Johnson, and then we went
22 back to the Bendix Kings because they're a better radio.

23 Q. When you say "we," you're talking --

24 A. Our agency.

25 Q. -- about the Boise --

1 A. The Boise District.

2 Q. -- part. Okay. And you know about Bendix King
3 radios, they are a digital radio that requires a support
4 network of digital towers?

5 A. Yes.

6 Q. That sort of thing?

7 A. From what I understand.

8 Q. Now, I want to ask you some questions about
9 your report for Ignition Number 8. Do you have it with
10 you?

11 A. Yes.

12 Q. First of all, you've reviewed it, I take it,
13 before you came today?

14 A. Uh-huh.

15 Q. Same with --

16 A. Yes.

17 Q. -- Ignition Number 9?

18 A. Yes.

19 Q. I first want to ask you about the location.
20 Can I ask Ms. Root to -- well, first, your location on
21 the first part lists it as a bunch of numbers T31S and
22 R38E in Section 36; is that right?

23 A. Township, section, and range.

24 Q. Right. That's on the very first page of your
25 report?

1 A. Uh-huh.

2 Q. In Section 36?

3 A. Yes.

4 Q. So "T" means township?

5 A. Yes.

6 Q. "R" means range. "S" means south. "E" means
7 east.

8 A. "S" means probably section. Are you talking on
9 the first part of it, the Section 36?

10 Q. Well --

11 A. Oh, yes, 31 south --

12 Q. Yes. 31 south --

13 A. -- 38 east.

14 Q. -- 38 east in Section 36.

15 A. Yes.

16 Q. Now --

17 MR. BLACKMAN: Talk one at a time.

18 BY MR. MATASAR:

19 Q. I'm sorry. Can you pull out, Ms. Root,
20 Government Exhibit Number 70. Could you expand it where
21 it says Ignition 8. Now, there is a number under
22 Ignition 8 which says 14.

23 A. Yes.

24 Q. What does that mean?

25 A. That's the -- that would be the Section 14.

1 The fire location on the report is from the initial -- I
2 believe it's from the initial location it was given. I
3 don't -- I don't know.

4 Q. Could -- Ms. Root, can you back out again. And
5 I think if you expand where it says Hardie-Hammond Fire,
6 around there. No. Yeah, there. I think a little bit
7 to the left of that. At the far right, where it says
8 "near Hammond cabin" to the right there. That's where
9 Section 36 is, is it not? Make it bigger, Ms. Root, by
10 "Hammond cabin."

11 A. Yes.

12 Q. So your report placed it there?

13 A. I think that was the initial again, where the
14 location -- where the initial fires may have been, the
15 general location.

16 The only way to really figure it is if I took
17 the GPS coordinate that I took at the origin to
18 determine -- because you can convert that to lat/long
19 and get the section, township, section, range,
20 specifically.

21 Q. Let me ask about securing the scene at Ignition
22 Number 8. By the way, when you say location there, that
23 doesn't mean the location of the fire on your report?

24 A. That means -- well, the general location of
25 the -- I guess the Grandad Fire was within that area.

1 That doesn't mean the location -- location is a general
2 area. It doesn't mean like the point of origin.

3 Q. So your report on the face page for location is
4 not supposed to indicate the specific place that you did
5 your investigation?

6 A. The general area, which I guess it's in the
7 general area up there.

8 Q. When did you get to the scene?

9 A. I believe I arrived on the 28th of August in
10 2006.

11 Q. That's when you got to Oregon or when you
12 actually got to the scene?

13 A. I can't remember if we went out there that day.
14 I know I got -- did the fire investigation for Number 8
15 on the 29th.

16 Q. Okay. That's what I was asking. And did you
17 take any steps to secure the scene?

18 A. I myself, no. I arrived -- what is that? Six
19 days after the report of initial ignitions.

20 Q. When you got there, could you tell if there had
21 been any efforts to secure the scene?

22 A. Not that I could tell, per se. It was in a
23 remote area. There weren't a lot of people around, so.

24 Q. So it's not necessary to secure the scene in a
25 remote area?

1 A. I wouldn't say it's not necessary. I guess it
2 depends on the circumstance and the fire and where
3 you're at.

4 Q. And pardon?

5 A. And where you're at, where --

6 Q. Okay. But the handbook that you worked on says
7 that one of the things that should be done is to secure
8 the scene; is that right?

9 A. Yes.

10 Q. And there is also a list of common mistakes at
11 the very beginning, a list of common mistakes. And one
12 of them is failure to secure the scene; is that right?

13 A. Yes.

14 Q. And you say in your report that you walked the
15 perimeter of -- what you are calling Ignition 8?

16 A. Yes.

17 Q. Did you walk it once or twice?

18 A. I don't remember. I generally walk the area a
19 few times to get -- to look at the macro indicators on
20 all directions. It was six years ago.

21 Q. But it's six years ago, but you wrote a report?

22 A. Uh-huh.

23 Q. And the report is the sort of end to all or the
24 conclusion of your investigation; is that correct?

25 A. Yes.

1 Q. And the handbook says that?

2 A. I don't know if the handbook says that.

3 Q. What about -- do you indicate in your report
4 that you walked it twice?

5 A. I don't believe I did say that specifically,
6 no.

7 Q. Did you use a magnet or metal detector in your
8 investigation of 8 or 9?

9 A. I did not have a metal detector, so I didn't
10 use that. I can't remember using a magnet. It's
11 general practice for us to use magnets. I mean, I do it
12 on all the other fire investigations. I can't say for
13 sure.

14 Q. Are there -- but if you did do it, you would
15 put it in your report?

16 A. Not necessarily.

17 Q. Do you search for accelerants?

18 A. As far as looking at the general area where
19 they were at, didn't smell anything. And there is
20 nothing that would suggest there could have been a
21 possible accelerant, so that's about as far as I went to
22 look at the indicators for that type of cause.

23 Q. Now, it was dry and windy at the time of the
24 fire, you are aware of that, are you not?

25 A. At the time of the initial Grandad Fire?

1 Q. On August 21, 22, and 23 of 2006 in the Steens
2 area?

3 A. Yes, on and off, I suppose.

4 Q. You don't know?

5 A. Well, I don't know for sure.

6 Q. And you know what spotting is?

7 A. Yes.

8 Q. And you are aware that spotting -- I won't get
9 into a detailed discussion, but you are aware that the
10 drier, the windier, and the warmer it is, the farther
11 the spotting distance will be?

12 A. Yes.

13 Q. Are you aware of the firefighting operations
14 that were going on during this fire?

15 A. Some of them. We were pretty far away from the
16 Grandad Fire itself, which I guess they're now calling
17 the Lower Bridge Creek Fire. But we were pretty far
18 away from that. I do know that some of the crews had
19 tried to conduct a burnout operation a couple days prior
20 to the fire.

21 Q. Pardon me. Go ahead.

22 A. Or a day prior, I can't remember.

23 Q. And that burnout operation was essentially near
24 Ignition sort of 1, 2, 3, 4, 5 up there in the top?

25 A. This black line right here (indicating).

1 Q. Right. And are you aware of a test fire that
2 was also done?

3 A. Yes.

4 Q. Okay. And you know that sort of got -- I don't
5 know if out of control is a technical word, but they had
6 to call firefighting equipment -- for firefighting
7 equipment at the test fire, are you aware of that or do
8 you know anything about that?

9 A. I heard -- no, I don't.

10 Q. Now, you mentioned the Grandad Fire, you called
11 it the Granddad Fire, which I guess they're now calling
12 the Lower Bridge Creek Fire, is that what you said?

13 A. Yes.

14 Q. So when you were there, it was called simply
15 the Grandad Fire?

16 A. Correct.

17 Q. That whole area?

18 A. The whole area.

19 Q. Okay. Now, you've talked a little bit about
20 the footprints at Ignitions 8 and 9.

21 A. Yes.

22 Q. And you said there were footprints -- foot
23 tracks between Ignitions 8 and Number 9?

24 A. Yes.

25 Q. Now, did you photograph a single footprint near

1 Ignition 8?

2 A. I can't say -- I think there was a partial
3 print in one of mine that didn't really show up very
4 well. So I didn't have a good -- a good, I guess, track
5 or footwear impression to photograph.

6 Q. So you didn't take any photographs of any
7 footprints at Ignition 8?

8 A. No, not that I recall.

9 Q. Okay. Now, you drew diagrams for Ignitions 8
10 and 9, did you not?

11 A. Yes.

12 Q. Do you have them with you?

13 A. I do.

14 Q. Now, didn't you write on the diagrams "not to
15 scale"?

16 A. Yes.

17 Q. And that's because they weren't to scale?

18 A. Correct.

19 Q. Now, doesn't the handbook say that you should
20 prepare a scale diagram for your written report?

21 A. I don't know.

22 Q. Well, let me see if this will refresh your
23 recollection here. Well, you know Gary White, right?

24 A. Yes.

25 Q. You know he's taught a class on -- or he's

1 written an article about wildland fire sketches.

2 A. I wasn't aware of that.

3 Q. You weren't aware of that?

4 A. I wasn't aware of that.

5 Q. Would you agree that the handbook says on page
6 58, "after the rough sketch is prepared at the fire
7 scene" -- which is what you did -- "the investigator
8 should prepare a scale diagram for the written report"?

9 A. Again, it's "should." It's not a "must"
10 prepare.

11 Q. You based your opinion -- it's sort of -- you
12 do what you think is right at the scene and at the time;
13 is that right?

14 A. No. You look at the situation. Not all fires
15 are we going to have to use -- like you suggested maybe
16 accelerant testing, if there's no indication of it,
17 you're not going to take it beyond that point.

18 Q. What about a scale diagram?

19 A. I don't know.

20 Q. You have a footprint, I take it -- in a case
21 where you have a footprint, and then you have a point of
22 origin, right, isn't it important to know how close the
23 footprint is to the point of origin?

24 A. I guess. But that's just a representative,
25 that's one footprint.

1 When I was looking Ignition 8, there were -- I
2 did take measurements between prints, and -- like the
3 measurement from where the origin area was to the road.
4 And, again, I didn't have like exact prints, like one
5 after another to measure. They were just kind of
6 sporadic where we could find them. So couldn't get the
7 exact, I guess, measurement between -- you know, like
8 the stride or anything or distance, that kind of thing.

9 Q. Let me ask a more general question. If you are
10 saying that a person used a portable ignition source to
11 ignite a fire, isn't it important, if you can, to
12 measure the distance between the footprint and the point
13 of ignition?

14 A. Yeah, I suppose it would be if you could find a
15 good point of --

16 Q. Certainly if it was 6 inches it would be
17 different than if it was 32 inches, right?

18 A. Sure.

19 Q. That would help you decide?

20 A. (Nodding head.)

21 Q. Okay. Now, you based your opinion on Ignition
22 8 on the recovery of shoe impressions resembling those
23 located near the other wildland fire origins in the
24 area, right?

25 A. Yes.

1 Q. Okay. Was it your decision -- was it your
2 determination that they resembled other shoe
3 impressions?

4 A. Yes. I got to look at some of the other
5 prints.

6 Q. So your impression -- your prints that you saw
7 at Ignition 8, which were not clear enough to even
8 photograph, you were able to compare those to other shoe
9 impressions and make a decision to call it the basis for
10 your -- your opinion?

11 A. No.

12 Q. No. How did you do it then?

13 A. Well, the fact that you have shoe impressions
14 to begin with, you have one type of shoe, it's a
15 smoother soled shoe, and all these ignition points. And
16 they kind of follow a path or a line of -- the ignition
17 points follow the shoe prints, whether it's a partial or
18 whether it's a full print.

19 Q. So you saw that there were a lot of footprints
20 in the area. And you didn't really -- it wasn't
21 important to you what they looked like as much as that
22 they were in a certain path; is that what you're saying?

23 A. So you take in what they look like and the fact
24 that they were in a path.

25 Q. Well, let me ask about Ignition 9 because you

1 did actually take photos there, did you not?

2 A. Yes.

3 Q. Let me show you one of them here. This is
4 1331. Is this one of the photos that you took?

5 A. Yes.

6 Q. That's one of the ones you took?

7 A. Yes.

8 MR. MATASAR: I move the admission of 1331,
9 Your Honor.

10 MS. SGARLATA: No objection.

11 THE COURT: Received.

12 BY MR. MATASAR:

13 Q. Well, that's one of the photos that you took;
14 is that right?

15 A. Yes.

16 Q. Now, you did measure the footprints. And,
17 again, just like at 8, none of these were cast, none of
18 these used a golf tee, none of these were taken with a
19 flash, none of the sort of things that are in the
20 handbook were followed, you just put your camera over
21 the photos where you could, although on some -- is that
22 right?

23 A. Yes, I took a photo of the foot tracks.

24 Q. Okay. And how many footprints were there at
25 Ignition Number 9, do you recall?

1 A. I recall four that we could distinguish in the
2 general origin area or specific origin area, actually.

3 Q. And you measured them?

4 A. When we took -- when I took the photographs,
5 tried to take one just of the shoe impression and then
6 one with the scale. I -- as far as measurement, that's
7 how I measured them.

8 Q. Pardon me?

9 A. That's how I measured them.

10 Q. And you came to a determination of how long
11 they were?

12 A. The length of the track --

13 Q. Yes.

14 A. -- or the foot impression? Couldn't make a
15 total determination as to how long approximate --
16 because you didn't have a complete like toe-heel perfect
17 impression.

18 Q. Did you pick a number to put in your report for
19 the length of the boot print?

20 A. Yes.

21 Q. And what was that number?

22 A. It was approximately 14 inches.

23 Q. Okay. And that was -- and are you saying that
24 a boot or a shoe that's 14 inches long made that
25 impression?

1 A. No. The impression that was left at the scene
2 could have been approximately 14. However, when you
3 look at some of these, they range from like more 13, 12,
4 to 14.

5 Q. Did I not ask you at the last hearing this
6 question and didn't you give this answer: "So are you
7 saying that a boot that's 14 inches or a shoe that's
8 14 inches made this impression?"

9 And you said, "yeah, approximately. I mean, I
10 can't say for sure."

11 But you said that -- the point was the size of
12 the boot was 14 inches?

13 A. I don't know if the size of the boot was
14 14 inches.

15 Q. But is it your opinion that a person with a
16 14-inch footprint is the person that set these fires?

17 A. I know the foot impression left resembled an
18 approximate 14 inches. Whoever left that foot
19 impression is probably the one that started the fire,
20 because it's the same thing in all of the ignitions, the
21 same type of print found, not necessarily 14. That's
22 the approximation number that we came up, I think, based
23 on the original measurement of the heel to toe in the
24 softer, sandy soil, but I can't say for sure that it was
25 a 14-inch foot or boot.

1 Q. I may have been unclear in my question. So is
2 it your opinion that a person with a 14-inch footprint
3 is the person who set the fires?

4 A. It is my opinion that the person that had
5 the -- the shoe that resembled that was the same at
6 every ignition that we saw, resembled that and
7 approximately 14 inches in measurement was the one that
8 set the fire.

9 Q. Well, didn't you give a much simpler answer
10 when I asked you this last time? Didn't I ask you, "and
11 so" -- we had some discussion about the footprints.
12 "And so is it your opinion that a person with a 14-inch
13 footprint is the person who set the fire?"

14 Your answer was "I would say given all the
15 other evidence, more likely than not."

16 A. Yeah. And you're taking it in context of what
17 we're seeing on the fires, everyone was coming up with
18 the same approximation of a 14-inch footprint, so --
19 (nodding head).

20 MR. MATASAR: You never did any comparison --
21 well, let me withdraw that. I have nothing further.
22 Mr. Blackman has some questions.

23 CROSS-EXAMINATION

24 BY MR. BLACKMAN:

25 Q. I really have just a few.

1 The methodology that's both in the handbook and
2 the FI-210 manual says that not only are you supposed to
3 have a hypothesis, in your case here the hypothesis is
4 that Ignitions 8 and 9 were intentional ignitions, but
5 you're also to test your hypothesis, correct?

6 A. Yes.

7 Q. You agree with that?

8 A. Yes.

9 Q. And to test the hypothesis that you have here,
10 wouldn't it be important to know whether or not in any
11 of the locations where foot tracks were found, they were
12 in close enough proximity to the specific point of
13 origin of any of the ignitions to account for the person
14 making the print having somehow ignited the ignition;
15 wouldn't that be close enough?

16 A. I guess I don't fully understand the question.

17 Q. Okay. Well, let's say the hypothesis is, since
18 you found no, as you called it, incendiary device -- and
19 just to be clear, if someone uses a match to light a
20 fire, and that match is there, you will find evidence of
21 the match, won't you, more often than not?

22 A. In some cases you will, yes.

23 Q. And if someone uses, like -- as I have read
24 someplace -- a couple of cigarettes, maybe somehow
25 banded together --

1 A. Yes.

2 Q. -- and you'll find the evidence of those
3 cigarettes?

4 A. You should find remains of that. Like I said,
5 depending on the fuels that it was placed in.

6 Q. Right. And in each of the locations that you
7 examined, you found nothing like that?

8 A. No.

9 Q. So the ignition could certainly be accounted
10 for in the fact that there is no ignition device located
11 in -- as a -- something natural that started that fire,
12 such as an ember or a burning material that is
13 indigenous to the location, having wafted over there,
14 landed, and started the fire, right?

15 A. If that's all you had, we had -- you, again,
16 look at the totality of the evidence.

17 Q. I understand. But it would be consistent -- it
18 would be a hypothesis consistent with what you saw on
19 the ground that some vegetation, indigenous to the area,
20 that was burning landed in the location, and ignited the
21 similar material near where it landed?

22 A. No.

23 Q. Wouldn't that also explain an ignition for
24 which you could find no incendiary device?

25 A. As -- if the fire were to spot and start a

1 fire, yes, you would not find an incendiary device.

2 Q. Right. Or if a drip torch had started a fire
3 and an ember from that fire had drifted, that would be
4 the same thing, correct?

5 A. Correct.

6 Q. Or if a spark from something, right?

7 A. Depends on the spark, sometimes you do find
8 metal materials.

9 Q. Right. So the hypothesis that you were
10 considering was rather than natural conditions, rather
11 than spotting, rather than any of those other
12 hypotheses, that this was based -- that your hypothesis
13 was that someone intentionally lit a fire with -- in
14 some manner that left no evidence, so not a match, not
15 cigarettes, none of the things that you would find
16 evidence of, and that person was responsible because
17 there were footprints in the area, right?

18 A. You look at all possible causes. And what is
19 the most probable, as you said, in forming your
20 hypothesis, what is all the evidence at the scene, so
21 you take the totality of everything you are seeing. And
22 generally if you have a lot of spotting, I don't think
23 it comes with a trail of foot tracks.

24 Q. I understand that. That's why that's your
25 hypothesis. And I'm trying to understand if, as the

1 handbook and your training and the FI-210 manual all say
2 you are to test your hypothesis, I'm asking you once you
3 had that hypothesis and you had a foot track and you had
4 a specific point of ignition, did you test your
5 hypothesis to see if that footprint that you found was
6 close enough to that ignition point to be possible for
7 someone to have -- without leaving any other evidence
8 close to the point of origin -- to have done what you
9 are hypothesizing?

10 A. Well, if I understand -- I guess you are trying
11 to suggest that if I had measured, I guess, the one
12 footprint or the couple that I found that was near the
13 point of ignition, that that would prove that it was or
14 wasn't --

15 Q. For example, if the closest print that you saw
16 evidence of was three feet from the ignition point that
17 you had determined, wouldn't that be inconsistent with
18 your hypothesis because someone simply can't reach three
19 feet without getting some boot print closer?

20 A. No. Again, I didn't have consistent footprints
21 that we're looking at. So there could have been -- he
22 could have stepped on some grass or could -- there could
23 have about been other prints closer to the area found,
24 so.

25 Q. Let me simplify it. Did you have anybody --

1 yourself or anyone else -- place a foot in the location
2 of the print that you found closest to either of these
3 points of ignition and see if they could reach the point
4 of ignition from that location?

5 A. I don't recall doing that.

6 Q. You didn't do that. All right. And isn't that
7 what testing the hypothesis would have required?

8 A. No.

9 Q. No. You don't have to actually see if what you
10 are hypothesizing is physically possible?

11 A. Again, you take all the evidence and data
12 collected and form a hypothesis.

13 Q. Now, other than being told by other people what
14 had happened, which appears to have played a major role
15 in your origin and cause determination, did you, in
16 fact, try to independently locate the specific ignition
17 points of 8 and 9?

18 A. On 8, I was working alone. On 9, I did have
19 another investigator with me.

20 Q. But I'm asking you if you did something to
21 specify, not just "this is where Lance said he saw a
22 fire"?

23 A. Right. That's where it comes in with the
24 methodology, you're looking at the macro indicators, the
25 micro indicators, you are taking the advancing burn

1 patterns, reading them down to the general origin area,
2 to the specific origin area, and kind of hone in on
3 that.

4 Q. And then once you do that, did you, in fact,
5 plot those -- that location at some scientific way?

6 A. Location, we took a -- I took a GPS point of
7 the origin and just measured, I think the distance from
8 the road to the origin.

9 Q. Didn't you, in fact, plot what are called the
10 Universal Transverse Mercator coordinates of both 8 and
11 9?

12 A. The UTM, yes.

13 Q. Okay. I was going to say UTM, but I didn't
14 want to sound like I knew what I was talking about here
15 because I don't know what I'm talking about.

16 A. It's just a measurement, like, a lat/long, it's
17 a measurement of --

18 Q. And isn't it true that --

19 A. -- for location.

20 Q. -- for Number 8 the UTM coordinates were
21 zone -- you have this in your notes, I believe, maybe in
22 the photo log.

23 A. For Number 8?

24 Q. For Number 8. Why don't you tell us what the
25 UTM coordinates for Number 8 were?

1 A. You want me to read out the --

2 Q. Yeah.

3 A. -- actual --

4 Q. Or I can read it and you can tell me if I got
5 it right.

6 A. Okay.

7 Q. For Number 8, zone 11T 361531 4740019?

8 A. Yes.

9 Q. Got it right?

10 A. Yes.

11 Q. Even a trained monkey can do some things.

12 And for Number 9, did you do the same thing?

13 A. I believe so. Yes.

14 Q. Okay. And did you determine the UTM
15 coordinates at 9 to be zone 11T 360749 4740291?

16 A. Yes.

17 Q. Okay. Have you taken those coordinates, looked
18 at any of the government exhibits that place the
19 location of 8 and 9 to see if they are accurately placed
20 on any of the exhibits the government has offered in
21 this case?

22 A. No.

23 Q. Okay. So you don't know whether or not the
24 actual points of origin that you plotted on August 28
25 and 29 -- and 30, I believe, for 8 and 9, are actually

1 in the places that the government has put on any of
2 these exhibits?

3 A. I don't know. Looking at a map, they look like
4 the location, but, no, I can't say specifically.

5 MR. BLACKMAN: That's all, Your Honor.

6 MS. SGARLATA: Thank you, Your Honor.

7 REDIRECT EXAMINATION

8 BY MS. SGARLATA:

9 Q. Ms. Bilbao, do the government's exhibit -- the
10 exhibit to your left, do they fairly and accurately
11 represent the locations of where you were when you took
12 the photographs listed or depicted or written on those
13 exhibits?

14 A. Yes.

15 Q. Okay. Now, you were asked on cross-
16 examination, going back, about whether you did Ignition
17 Number 8 by yourself or whether you had another
18 individual with you.

19 A. Correct.

20 Q. And you were also asked questions about
21 securing the scene and other things that have been
22 mentioned as part of the methodology.

23 I would ask the clerk to hand you what has been
24 marked Government Exhibit 266 for identification. And
25 let the record reflect I'm handing a copy of the same

1 exhibit to counsel. I only have one copy. I'm sorry.
2 I'll hand it to you.

3 MR. MATASAR: We're good. We have a bigger
4 version.

5 BY MS. SGARLATA:

6 Q. Ms. Bilbao, are you familiar with Government
7 Exhibit 266?

8 A. Yes.

9 Q. What is it?

10 A. It is the Wildfire Origin and Cause
11 Determination Handbook.

12 Q. Is that a document that you helped provide
13 input to?

14 A. Yes.

15 Q. In fact, is your name listed on Roman numeral
16 page four?

17 A. Yes.

18 Q. And can you please turn to page 2 of that
19 document. You were asked questions on cross-examination
20 about a fire scene examination being taken alone. Can
21 you please read -- or can you look at page 2, to the
22 extent that it discusses when a fire scene examination
23 should be undertaken alone. And can you tell us does
24 that set forth a statement to that regard as a
25 commandment or as a prefatory statement or what kind of

1 statement?

2 THE COURT: Don't read it. Is it in evidence?

3 MS. SGARLATA: No, Your Honor. It's just for
4 identification.

5 THE COURT: Don't read it out loud.

6 THE WITNESS: Okay. Examining it, it's a
7 suggestion.

8 BY MS. SGARLATA:

9 Q. I would ask you to turn to page 40 of that
10 handbook. And you were asked questions on
11 cross-examination about security and whether the scene
12 was secured.

13 A. Okay.

14 Q. Would you -- looking at page 40 and directing
15 your attention to anything having to do with securing a
16 scene, could you take a look at what that page says, and
17 look up at me when you are done reading what, if
18 anything, that page says about security.

19 A. (Witness complies.)

20 Q. Now, is it a requirement, according to the
21 handbook, to post a security person at the general
22 origin area?

23 A. No.

24 Q. Okay. Can you turn to page 52 of that manual
25 and look at anything on page 52 that refers to shoe

1 impressions. And when you are done looking at that,
2 would you look back up at me.

3 A. (Witness complies.)

4 Q. Now, does the handbook dictate that shoe
5 impressions must always be cast?

6 A. No.

7 Q. Can you please to turn page 58 of the handbook
8 and look at anything on that page that discusses
9 sketching a scene. And when you are done reading that
10 page, would you look up at me.

11 A. (Witness complies.)

12 Q. Does the handbook dictate that a sketch must be
13 to scale?

14 A. No.

15 Q. Would you please turn to page 77 of the
16 handbook and look at what, if anything, on that page
17 discusses arson or incendiary cause indicators. When
18 you are done, look up at me.

19 A. (Witness complies.)

20 Q. Can you explain to the jury what are some arson
21 or incendiary cause indicators, without reading it from
22 the handbook?

23 A. Sure. We look for -- like in spree arson,
24 multiple fires set at one time, so you have multiple
25 fires within a proximity of time and location. The lack

1 of ignition source, what we call hot set, somebody could
2 use a lighter to start it, take it with them. Sometimes
3 that could be a match left at the scene, sometimes it's
4 not.

5 I think in the majority of wildland arson
6 fires, it is generally a hot set. So you would look at
7 the other evidence.

8 What we look at a lot are the footprint tracks,
9 are there foot tracks going in and out of the scene?
10 Are they in close proximity to where the fire was set?
11 And you are looking at ruling out other possible causes.
12 We rely a lot on witness statements and other things
13 found at the scene.

14 Q. And you were asked on cross-examination about
15 ignition devices and whether you would find matches, for
16 example, someone used matches to set a fire, whether you
17 would find some indication of that at the scene or the
18 general or specific origin area.

19 Now, is it possible in your experience and your
20 training and experience in this area, is it possible for
21 someone to use a portable ignition device to set a fire?

22 A. Yes.

23 Q. What does it mean to use a portable ignition
24 device?

25 A. That's usually a lighter, which you can just

1 light, especially being in a remote area, you are more
2 likely not to be seen, but you can light the grass, this
3 type of fuel type, especially if it's dry enough, it
4 will ignite quickly, and you just take the ignition
5 source with you.

6 Q. You were also asked on cross-examination about
7 a footprint being three feet away from a point of
8 origin. Now, do you recall -- were there -- do you
9 recall the terrain in the areas of Ignitions 8 and 9?

10 A. Yes.

11 Q. Did any part of that terrain include rocks?

12 A. Yes.

13 Q. Is it possible to step on those rocks?

14 A. Yes.

15 Q. Are you familiar with whether or not footprints
16 leave impressions when someone steps on rocks?

17 A. In my experience, they do not.

18 Q. Now, that handbook, the origin and cause
19 determination handbook that you helped write, what year
20 is that handbook?

21 A. May 2005 is when it was published.

22 Q. And so that was approximately seven years ago?

23 A. Yes.

24 Q. Okay. And you explained how macro and micro
25 indicators led you to determine the origin area. Are

1 micro indicators frequently something that remain
2 on-site five to six years later?

3 A. Not generally. It's more the macro indicators.

4 MS. SGARLATA: Okay. No further questions.

5 MR. MATASAR: Just a few follow-ups, Your
6 Honor.

7 RECROSS-EXAMINATION

8 BY MR. MATASAR:

9 Q. Ms. Bilbao, could you -- just two general
10 areas. Can you look at pages 49 through 52 of the
11 handbook.

12 A. (Witness complies.)

13 Q. Is there anything in bold on 49 -- on page 49,
14 50, or 51, other than the headings?

15 A. 49, 50 and 51. In the print?

16 Q. Yes. Nothing is bolded except the headings,
17 correct?

18 A. Correct.

19 MR. MATASAR: And, Your Honor, just for
20 purposes -- demonstrative purposes, since it's been
21 discussed, I would like to show the jury page 52.

22 THE COURT: Instead, you can use it -- you can
23 ask her a question from it. I don't want to put it up.
24 It's not necessary.

25 BY MR. MATASAR:

1 Q. All right. Is it your testimony that you were
2 asked about shoe impressions, it doesn't matter, it's
3 not in here? It's bolded in here, right?

4 A. It is bolded, yes.

5 Q. The only thing that -- you wrote this book.
6 Doesn't that mean it's particularly important?

7 A. No, it's not the only thing. Right -- the line
8 right below it is in bold also.

9 Q. And that says casting a tire impression is
10 problematic, but we're not talking about tire
11 impressions. We're talking about shoe impressions,
12 right?

13 A. Correct.

14 Q. And shoe impressions should usually be cast?

15 A. If it is needed, if it's called for on the
16 scene.

17 Q. I'm asking you, that's bold in there?

18 A. It's bold in there, but -- it's bold in there.

19 Q. Now, when you were questioned about page 58,
20 and the diagram being drawn to scale, I didn't exactly
21 understand what you were saying. Are you saying that
22 the final diagram should not be drawn to scale?

23 A. No. I said I -- we didn't do -- I didn't do it
24 in this case. It's not a requirement to do scale.

25 Q. And that's from what you are reading on page

1 58?

2 A. (No answer.)

3 Q. When Ms. Sgarlata asked you the question -- I
4 guess my question is -- doesn't -- on page 59, the
5 second-to-the-last sentence, doesn't that simply say,
6 "final diagram should be drawn to scale"?

7 A. On 59?

8 Q. Page 59. Do you see those bullets there?

9 A. Yeah, it says, yeah, "final diagram should be
10 drawn" --

11 Q. Go ahead.

12 A. "Should be drawn to scale," should be.

13 MR. MATASAR: Okay. That's all I have.

14 MS. SGARLATA: Two questions, Your Honor, if I
15 may?

16 THE COURT: Short.

17 REDIRECT EXAMINATION

18 BY MS. SGARLATA:

19 Q. Ms. Bilbao, is there a difference between
20 "should" and "shall"?

21 A. I would say so.

22 Q. And last question, with regard to the map to
23 your left, did you give Stacey Fenton coordinates to
24 plot the location of the photographs you took?

25 A. No.

1 Q. Okay. Did you review -- did you review a copy
2 of this map essentially?

3 A. I looked at this map, yes.

4 Q. And I think I might have already asked you
5 this, but are the location of the exhibit numbers fairly
6 and accurately represented on the map?

7 A. Yes, of the general areas, yes.

8 MS. SGARLATA: No further questions.

9 THE COURT: Thank you. You may step down.
10 Your next witness, please.

11 MS. SGARLATA: Government would call Ron Holle.

12 (The witness was sworn.)

13 THE CLERK: Please have a seat. Please speak
14 clearly into the microphone here. And there is water if
15 you would like some.

16 Please state your full name, and then spell
17 your name for the record.

18 THE WITNESS: Ronald Lee Holle, last name is
19 H-O-L-L-E.

20 DIRECT EXAMINATION

21 BY MS. SGARLATA:

22 Q. I would ask the clerk's assistance in bringing
23 up the maps Exhibits Number 29 and 30, if possible. And
24 while Ms. Wright is assisting us in at that regard,
25 Mr. Holle, could you please tell us how you are

1 employed.

2 A. I am self-employed. I am a meteorologist and
3 am a consultant to a company in Tucson that owns and
4 operates the National Lightning Detection Network, the
5 NLDN. I am a meteorologist first and work in lightning
6 as a subspecialty.

7 Q. How long have you been so employed?

8 A. It's been ten years as a consultant. I was
9 with the company two years before that.

10 Q. And what was your employment before that?

11 A. I was with the National Oceanic and Atmospheric
12 Administration, NOAA, N-O-A-A, for 38 years.

13 Q. Okay. And can you tell us some about your
14 education.

15 A. I have a bachelor's and a master's degree in
16 meteorology and some additional course work at the --
17 those were at Florida State University, and additional
18 course work at the University of Miami in meteorology.

19 Q. Okay. And have you served on any committees or
20 advisory panel memberships?

21 A. Yes, I have, quite a few.

22 Q. Can you give us a brief summary of those with
23 respect to lightning or meteorology.

24 A. Well, I've been on the -- the American
25 Meteorological Society has a lot of different

1 committees. I've served on half a dozen different
2 committees over the years. Most recently a committee on
3 atmospheric electricity. And most recently, the last
4 ten years, I've been cochair of the International
5 Lightning Detection Conference, ILDC, that Vaisala
6 sponsors every two years. We just held our last one
7 early April in Colorado.

8 Q. Okay. And have you also served on technical or
9 advisory committees?

10 A. Yes, I have. For conferences and also for a
11 number of committees, particularly organizations dealing
12 with lightning safety and lightning education and
13 cochairs of conferences, session chairs and so on.

14 Q. Okay. Now, have you been involved in writing
15 any scientific publications?

16 A. Yes, I do.

17 Q. Can you approximate how many for us?

18 A. Oh, I think it's about 350, something like
19 that.

20 Q. What did those have to do with?

21 A. The last couple hundred papers have primarily
22 been in lightning, lightning education. Earlier years I
23 was known as a photographer and a writer in field
24 projects in Africa and Florida and the Caribbean and
25 co-wrote some books that are fairly commonly available,

1 and studied thunderstorms in lots of different ways.
2 Career has been thunderstorms.

3 Q. Now, have you also given media interviews
4 concerning lightning or meteorological events?

5 A. Yes, I've done a lot of those.

6 Q. Can you give us some examples.

7 A. Oh, the Weather Channel, National Geographic,
8 Discovery Channel, just about all those types of
9 programs.

10 Q. Okay. Now, were you asked to provide
11 information in this case concerning whether and to what
12 extent lightning occurred in certain locations in the
13 Steens Mountains in 2001 and in 2006?

14 A. Yes, I was.

15 Q. Okay. And were you, in particular, asked about
16 whether there was any lightning in September 30, 2001,
17 in the general location of what's called the
18 Hardie-Hammond Fire in the Steens Mountains?

19 A. In 2001 we looked at the data, but I haven't
20 looked at that in detail.

21 Q. Okay. Can you tell us, how do you know whether
22 or not lightning occurred in certain locations? How
23 does that work?

24 A. Okay. I have been around the National
25 Lightning Detection Network, the NLDN, since it began in

1 1978. I was working on another, entirely different
2 program in Florida in the Everglades, and some
3 professors came and bought this equipment in 1978.

4 We had the first two sensors in the network.
5 And then since then, it gradually has grown. And in
6 1989 the whole U.S., the 48 states, were covered by the
7 National Lightning Detection Network. I was with the
8 federal government at the time, and was working with
9 data.

10 And then in 2000, the company running the
11 network called me and asked me to come to work for them,
12 and I've been there as an employee or a consultant since
13 then.

14 The network has about 100 sensors across the
15 U.S. They're scattered equally a few hundred miles
16 apart in sort of a lattice, honeycomb sort of pattern.
17 They are just about six feet tall. The sensors are
18 quite -- they don't look like much of anything. They
19 have a little bit of a dome over the top and they're
20 about six feet high with electronics inside, and angular
21 and time measurement systems inside.

22 These are very mature things that have been
23 around for -- since the late '70s. There is a new
24 design or an upgrade every five years or so.

25 Sensors like this are in 45 countries built by

1 Vaisala, the company that I am a consultant to. So
2 these are quite common.

3 They detect the angle and the time when a
4 cloud-to-ground flash hits the ground. When a
5 cloud-to-ground flash hits the ground it emits a unique
6 signal, electromagnetic -- that's the word -- anyway, it
7 sends out a signal across the ground and mostly in the
8 air. And when it arrives at one of these sensors, the
9 sensor compares it to what a lightning strike is
10 supposed to look like and says that was a
11 cloud-to-ground strike.

12 It sends the angle and the time, in GPS, time
13 and its amplitude and a number of other things to the
14 control center in Tucson. My cubicle is about ten feet
15 from the control center. And that's manned 24 hours a
16 day.

17 And it calculates the position based on the
18 angles and times from up to six or eight and ten at any
19 given time. So most of the time, most lightning is
20 detected by multiple sensors. So they give the angle
21 and the time, it then locates the position.

22 And in 2006, which is the one we're discussing
23 here, the accuracy was about 500 meters or about
24 500 yards at that time. And the timing is down to a
25 thousandths of a second and now it's down to one

1 millionth of a second.

2 Q. And when you mentioned cloud-to-ground
3 lightning, why do you specify cloud-to-ground? Is there
4 another kind of lightning?

5 A. Actually, there's about three or four times as
6 much lightning in the cloud as there is that strikes the
7 ground.

8 Those also can be detected, but the NLDN is not
9 tuned to detect cloud lightning as well. It's getting
10 better. But it doesn't detect as much of that.

11 So the unique thing about a cloud-to-ground
12 flash is that it is able to be detected strictly by
13 these antennas unambiguously or clearly and we know for
14 sure where they were.

15 Q. You mentioned the word "flash." Is flash the
16 same thing as a lightning strike?

17 A. Oh, boy, there is a lot of terminology here.
18 Let's keep it simple. A cloud-to-ground flash has one
19 or more return strokes. Something to remember. The
20 flash is the entire event from the beginning of it up in
21 the top of the cloud until it comes to the ground and
22 the thunder is gone. That's the whole flash.

23 Within the flash, when you watch lightning,
24 perhaps, flickering like this, those are return strokes
25 going up and down the channel. So some -- most flashes

1 have more than one return stroke. And those are the
2 ones that actually -- each one of those is measured by
3 the National Lightning Detection Network.

4 Q. Okay. Now, with respect to -- you mentioned
5 the sensors that, I guess, sense these lightning events,
6 and you mentioned there can be a difference in the
7 number of sensors that will pick up a certain lightning
8 event.

9 A. Right.

10 Q. Can you tell us a little bit more about that.
11 What -- why does that matter what number of sensors pick
12 up an event?

13 A. The more sensors you have, the better the
14 position is. Think of a flash hitting the ground at one
15 point. It's only about an inch across. It hits a
16 point. Each of the sensors, if there are sensors on all
17 sides looking at that point, you do locate it very, very
18 well.

19 Sometimes when the flash is very weak or just
20 is an odd shape, there may be as few as two that are in
21 a long ellipse looking toward that flash. When you're
22 not so sure where along that line connecting those two
23 is where -- is the location of the stroke. So the more
24 sensors you have, the more accurately the location is
25 given. And that's -- a typical number of sensors, I

1 think I've looked at the reports, is somewhere between
2 four and eight. Sometimes it can be more. Sometimes it
3 can be down as low as two. Never less than two because
4 you can't locate it with less than two.

5 Q. Now, you mentioned another word in your
6 explanation there. And because lawyers can be known to
7 be somewhat mathematically or geometrically challenged,
8 I'd ask, could you please tell us what the word
9 "ellipse" mean.

10 A. An ellipse is just a long -- a circle that's
11 been pulled out. In this case if you have two sensors,
12 they are looking at a point in the middle. And so you
13 actually have an ellipse that can define the area where
14 a strike could have occurred.

15 A circle is a special kind of an ellipse. It's
16 just round, but it's actually an ellipse that's been
17 shrunk down to a circle, so to speak.

18 Q. So with respect to what the lightning detection
19 sensors detect, is the appropriate terminology for --
20 well, can you tell us about the error rate with this
21 lightning detection -- with the lightning detection
22 sensors that you are discussing.

23 A. The network itself is the way we like to look
24 at it. Each sensor is just a part of the whole system.

25 In 2006, at that particular time, the error

1 average, median error was 500 meters or 500 yards. Now
2 it's 250 meters due to some improvements since 2006.

3 In 2006, half of the error, half of the
4 locations are known to be better than 500. We'll call
5 it yards. And half of them are less accurate than
6 500 yards. And that can actually be proven. And that
7 comes from calibration by hitting tall towers that we
8 know the locations of, sending out graduate students
9 with cameras to chase the lightning, and sending up
10 rocket trigger lightning. It's a famous thing you've
11 probably seen in some programs at the University of
12 Florida where you send up a rocket and it induces a
13 flash or a stroke in a cloud and brings it down to
14 ground so we know where that is.

15 And so by all those comparisons in the U.S. and
16 similar studies in Brazil and Austria, we know that the
17 accuracy at that time was about 500 meters.

18 Q. Okay. And so does that mean essentially that
19 when the lightning detection network detected a
20 lightning stroke at a certain location in 2006, it was
21 accurate about the location within approximately
22 500 meters?

23 A. Yes, the median accuracy. So half of them are
24 better than 500 meters and half of them are not as good
25 as 500 meters. And many of those that are not as good

1 are the two-sensor solutions.

2 Q. So the greater the number of sensors that
3 detect a particular event, the more accurate?

4 A. In general, yes.

5 Q. Okay. Now, turning to this particular case,
6 were you asked about whether, and to what extent,
7 lightning was present in the general area of what's
8 called Lower Bridge Creek, Grandad, and Krumbo Butte
9 Fires in the Steens Mountains in the time period of
10 approximately August 19th through the 21st, 2006?

11 A. Yes, I was.

12 Q. Okay. And were you able to cull that
13 information?

14 A. Yes. There is a product that Vaisala sells.
15 Let's go back to Vaisala, V-A-I-S-A-L-A, is the company
16 that owns and operates the network.

17 Vaisala has a service where you can go in on
18 the Web and order lightning for any time since 1989,
19 specify the locations, specify the time, and pay your
20 credit card bill, and you get back the answer. You can
21 do it 100 times and get the same answer back every time
22 because it goes to the same database.

23 Q. Okay. And I'd ask Ms. Root to please bring up
24 Government Exhibit 29 on the screen. Mr. Holle, there
25 should be a laser pointer up on the stand next to you

1 with two buttons, one of which brings out a red light
2 and the other some other color.

3 I'd ask Ms. Root to enlarge it, if possible.
4 How about in particular up by Krumbo Butte.

5 Now, Mr. Holle, do you recognize this exhibit?
6 Is this something you've seen before?

7 A. Yes, I have.

8 Q. Can you tell us what are the items depicted on
9 this particular exhibit?

10 A. Well, let's take this one, it's a little bit
11 out in the open. Let's see fairly --

12 Q. We will enlarge it.

13 A. There we go. It has the time in local Daylight
14 Time. It's 5:42 something p.m.

15 MR. BLACKMAN: I'd be happy to let him have my
16 copy.

17 A. There we go. Now we can see it. 5:42:57 p.m.
18 Actually, it's measured to a thousandths of a second,
19 but we don't -- that's not on there. And --

20 Q. Then could you back out this way.

21 A. And the peak amplitude is a measurement of the
22 strength of it. It also has the -- each strike to the
23 ground actually has an intensity. It ranges over a
24 factor of 100 or 1000 from very weak to very strong. So
25 utility companies use that information very intently for

1 knowing how strong it is.

2 So there's a minus 10.7 kiloamp, about 1000
3 amps.

4 Q. Does that mean it's particularly weak or strong
5 stroke?

6 A. The median intensity is around 20 kiloamps, I
7 believe it is, in the negatives. And I think all the
8 strokes on this particular case were negatives,
9 actually.

10 Q. Okay. And is that significant in any way?

11 A. Not really. Every lightning stroke that hits
12 the ground is fully capable of causing fires or damage
13 or injury or killing someone. There are no weak
14 lightning strikes.

15 Q. Now, I would ask Ms. Root, if possible, to
16 enlarge in particular the entire top part of that map,
17 so that -- pretty much right here, if possible. Is it
18 possible to make it even bigger? We're attempting to
19 zoom in a little bit more. If it's not possible,
20 Mr. Holle, I'll just direct your attention to the
21 exhibit on the easel to your left. It's not possible.

22 So directing your attention to the exhibit on
23 your left, are the lightning -- do you see various
24 lightning strokes depicted on that exhibit?

25 A. Yes, I do.

1 Q. And did you have an opportunity to review this
2 exhibit and determine whether the lightning strokes on
3 that exhibit are accurately set with respect to the
4 latitude and longitude?

5 A. Yes. We looked at the error ellipses on these
6 strokes. And for the most part, they are very well
7 located. There aren't very many long ellipses.

8 A lot of times there's -- a fairly high
9 percentage of them have two-sensor solutions that are
10 all strung out in ellipse. Most of them are quite tight
11 circles.

12 Q. Okay. And are you aware of whether the
13 lightning strokes depicted on this particular exhibit
14 are the same ones produced in the Vaisala report in
15 response to the query of what lightning strokes occurred
16 in the Krumbo Butte -- in the general Krumbo Butte,
17 Lower Bridge Creek and Grandad area on or about August
18 21st of 2006?

19 A. Yes. I think we went through and compared all
20 of them. They are the correct ones.

21 Q. Okay. And can you tell us what period of time
22 or what portions of the day was lightning actually
23 detected?

24 A. It shows on the top here. All of the lightning
25 on this day, which is August 21st, was between 3:19 and

1 6:12 in the afternoon.

2 Q. Okay. And do you recall approximately how many
3 strokes hit the ground between those hours on August 21,
4 2006, in this area on the map?

5 A. I think the number was 131, something like
6 that.

7 Q. Do you have a copy of your report with you?

8 A. No, it's across the hall.

9 Q. Okay. Let me see if I can find my copy to
10 refresh your memory, just so we know exactly -- you know
11 what, I would actually ask, Your Honor, I'd like to ask
12 one of my assistants to get Mr. Holle's copy of the
13 report, because I've written all over mine, and I don't
14 want to hand him this one. Would that be okay?

15 THE COURT: Sure.

16 THE WITNESS: It's in my briefcase or maybe
17 somewhere else.

18 THE COURT: Why don't we ask the jury, are we
19 ready for a break? Let's take a break.

20 MS. SGARLATA: Okay. Thank you.

21 MR. BLACKMAN: Is it the morning recess, Your
22 Honor?

23 THE COURT: Yes, we can call it that.

24 (Recess: 10:28 until 10:42 a.m.)

25 THE COURT: Okay. Let's finish the witness,

1 please.

2 BY MS. SGARLATA:

3 Q. Mr. Holle, have you had a moment to review your
4 report?

5 A. Yes, I have.

6 Q. And after reviewing your report, do you recall
7 the approximate number of strokes that the lightning
8 sensors picked up in the area of Krumbo Butte, Lower
9 Bridge Creek and the Grandad Fires on August 21, 2006?

10 A. Yes, I have.

11 Q. And what is that number?

12 A. The number -- there were 116 strokes during
13 this period from 3:19 to 6:12 p.m., and within a 15-mile
14 radius of the point that was specified, was 116 strokes.

15 115 of them were actually within the 15-mile
16 range. And there was another 11 that had their error
17 ellipses go into the 15-mile circle, or actually located
18 just outside the circle.

19 Q. Okay. And speaking of ellipses, I would ask
20 Ms. Root to enlarge in the legend, essentially,
21 underneath the title of Exhibit 30, and do you see the
22 specification lightning confidence ellipse on the top of
23 that map?

24 A. Yes, I do.

25 Q. And can you tell -- can you explain to us what

1 the 6 -- .64-mile radius means with respect to those
2 circles or ellipses?

3 A. Yes. The ellipses are measuring the 99 percent
4 chance that the stroke in the middle fell within that
5 ellipse. In this case most of them are circles. So
6 there is error in every measurement in angle. There is
7 error in every measurement in time. When you look at
8 all the random errors -- and we know that very well from
9 all these studies -- you can be 99 percent certain that
10 the stroke actually occurred within the ellipse or in
11 this case the circle.

12 Q. Now, were there any lightning strokes in this
13 area on the -- on August 22, 2006?

14 A. Yes, there were.

15 Q. And can you refer to your report and tell us
16 how many strokes were on August 22, 2006?

17 A. There were 116 strokes in that day.

18 Q. Directing your attention to Exhibit Number 30
19 and I'd ask Ms. Root to enlarge in the Krumbo Butte area
20 around the circles that appear. Do you see on Exhibit
21 30 on the screen here two lightning strokes with red
22 circles around them?

23 A. Yes, I do.

24 Q. What does that mean?

25 A. Okay. We have the point in the middle of this

1 one, for example, right here, and there is a circle
2 around it there. It might be a slight ellipse. It
3 looks like it may not be exactly round. But there is a
4 99 percent confidence that the strike located in the
5 middle is somewhere in this circle or ellipse.

6 Q. So does that mean there's a 1 percent chance
7 that the lightning strike was outside of that circle or
8 ellipse?

9 A. Yes.

10 Q. And there is a second circle or ellipse in
11 close proximity to the one you just pointed to. Can you
12 tell us about that one.

13 A. Yes. There is another one right to the north
14 of there. And it also has an associated ellipse. And
15 it's the same size.

16 Q. And is that the same confidence interval or
17 percentage of confidence, so in other words, a
18 99 percent chance that the second stroke occurred within
19 the confines of the circle or ellipse depicted on
20 Exhibit 30?

21 A. Correct.

22 Q. Now, I'd ask Ms. Root to do the same thing but
23 toward the Lower Bridge Creek area. Directing your
24 attention to Exhibit 30, where we've magnified the
25 lower -- the area of the Lower Bridge Creek Fire, can

1 you tell us what we are seeing here in this magnified
2 portion of the map.

3 A. Well, we see here the best estimate of the
4 location with a 99 percent ellipse around here. There
5 is another stroke with 99 percent and so on. And two
6 more over here.

7 Q. Okay. And I would ask Ms. Root to do the same
8 with respect to the general area of the Grandad Fire on
9 Exhibit Number 30.

10 And, Mr. Holle, could you look at Exhibit 30
11 and explain to us what we're seeing here with respect to
12 these red circles or ellipses in the lightning strokes?

13 A. Well, I see two of them located, one here with
14 the ellipse around it, and another one up here with an
15 ellipse around it.

16 Q. So what conclusion can we draw from the
17 ellipses around the circles here?

18 A. The fact that they are all basically round is
19 showing that the data were very accurate in this
20 particular storm. Most strokes in this storm are
21 located quite well, almost better than average.

22 Q. Okay. And were you able to pull up information
23 or apprise yourself of approximately how many sensors
24 detected each of the strokes on these maps?

25 A. It varied from three or four. And I think one

1 of them was up at 12 or 13 sensors.

2 Q. Okay. Now, direct your attention to -- I
3 believe it is page -- page 3 of your report, section --
4 I'm sorry, page 2 of your report, Section D, do you see
5 that?

6 A. Yes, I do.

7 Q. And is the title or the emboldened heading that
8 you see by D, does that say 19 August 2006 strike net
9 report?

10 A. Correct.

11 Q. Can you tell us, after looking at your report,
12 were there any lightning strokes detected in the
13 vicinity of the Krumbo Butte, Lower Bridge Creek, and
14 Grandad Fires on August 19, 2006?

15 A. No, there were none.

16 Q. Okay. And then can you tell us whether there
17 were any lightning strokes in those same areas on August
18 20, 2006?

19 A. No, there were none.

20 Q. Can you tell us whether there were any strokes
21 in these areas on August 21, 2006?

22 A. Yes. That's the day we looked at a minute ago
23 with 116 strokes either in the circle or with
24 overlapping ellipses.

25 Q. And those were all between what hours of day?

1 A. Between 3:19:56 and 6:12:44 p.m. Pacific
2 Daylight Time.

3 Q. Can you tell us, do you recall whether you
4 looked into whether there were any strokes on August 22,
5 2006, in the vicinity of Krumbo Butte, Lower Bridge
6 Creek, and Grandad?

7 A. Yes, we looked at that day, and there were no
8 strokes.

9 Q. So the only -- and I would ask you the same
10 question with respect to August 23, 2006.

11 A. There were none that day.

12 Q. So the only -- of those days that we just spoke
13 about, the only day on which lightning -- there were
14 lightning strokes -- cloud-to-ground lightning in the
15 vicinity of Krumbo, Lower Bridge Creek, and Grandad was
16 on the 21st of August?

17 A. That's correct.

18 Q. Okay. And are you confident about that -- are
19 you sure about that to a reasonable degree of certainty
20 in your field?

21 A. Yes, I am.

22 Q. Okay. And so you have been working with
23 this -- these sensors or the Lightning Detection Network
24 for a number of years?

25 A. Yes, I have.

1 Q. And you are confident in the ability of the
2 sensors to properly document where these strokes
3 occurred?

4 A. Yes. And on the first two days and the last
5 two days, the lack of any lightning means that it's
6 virtually certain that there was no thunderstorm,
7 because almost virtually every storm has more than one
8 stroke, and you can't miss more than one stroke in a
9 storm.

10 Q. Okay. So with respect to the fact that on
11 August 21st, there were 116 strokes on that particular
12 day, within 15 miles around the same center point, is
13 that a large number of strokes to have in a particular
14 weather event?

15 A. I'd say it's about average. Not a big storm,
16 but it's not a tiny storm either. Small storms may have
17 5 or 10 or 20 strokes. Large storms can have hundreds
18 on a day. Within 15 miles, it could go up into many
19 hundreds of storms -- of strokes. So this is -- 116 is
20 pretty run of the mill.

21 Q. Okay. So this was not a particularly -- this
22 was not a particularly abnormal storm with respect to
23 the number of lightning strokes?

24 A. No, it wasn't.

25 Q. Okay. Now, does that break down to

1 approximately an hourly rate of 30 to 40 strokes an
2 hour?

3 A. Correct.

4 Q. Okay. And --

5 A. That actually breaks down -- I hadn't thought
6 of that -- it breaks down to one every two minutes,
7 which is not a very strong storm.

8 Q. Okay. So you've seen storms that are stronger
9 than that in your career?

10 A. Much stronger, yes.

11 Q. Now, will you go into a little bit more detail
12 with the confidence ellipses. Is there -- you say it's
13 99 percent likely that the stroke did, in fact, hit the
14 ground somewhere within the confidence ellipses,
15 correct?

16 A. Yes.

17 Q. Is there a difference -- are you able to
18 determine how likely it is that the stroke hit the
19 ground in the center of the ellipses versus toward the
20 outer edge of the ellipses?

21 A. The most likely solution -- I can't turn this
22 laser off. But, anyway, the most likely solution is in
23 the middle, and less and less likely is going outward
24 till the outer edge is unlikely but possible at
25 99 percent, would be the way I'd put it.

1 Q. Okay. So in other words, the outer edge of
2 these circles or ellipses that we're seeing, there is 1
3 percent or less or approximately 1 percent chance that a
4 stroke actually happened around the outer edge?

5 A. Well, let's just say it becomes less and less
6 likely. It's most likely at the position where it's
7 been located. And less and less likely outward.

8 Q. And then there's a 1 percent chance that it
9 happened outside of the circle --

10 A. Yes.

11 Q. -- or ellipses altogether?

12 A. Correct. And that's been verified by a lot of
13 studies.

14 MS. SGARLATA: Thank you. No further
15 questions.

16 THE COURT: Cross.

17 CROSS-EXAMINATION

18 BY MR. MATASAR:

19 Q. Mr. Holle, you've indicated your 99 percent
20 rate. Earlier you were talking about 50 percent within
21 500 meters. Can you relate those two -- those two
22 measurements?

23 A. Okay. The location accuracy in 2006 of the
24 network was 500 meters, let's call it 500 yards. Half
25 of them are better than 500 yards, half of them are not

1 as good as 500 yards.

2 Q. So that means -- go ahead.

3 A. That's just a little different way -- that's a
4 distribution measurement, while this is an aerial
5 measurement. So they don't quite relate exactly the
6 same way.

7 Q. But if you have a center point -- Ms. Root, can
8 you make just any one of those circles bigger. So let's
9 just take this one here. If you have center point and
10 you drew a 500-yard circle around that, 500-meter circle
11 around the center point --

12 A. Right.

13 Q. -- which means essentially that it's 1000
14 meters in diameter?

15 A. Correct.

16 Q. So are you then saying that there is a
17 50 percent chance that it's outside of that circle?

18 A. I don't think the circle relates directly. The
19 circle -- I think on the top of the thing there, it was
20 measured. I didn't have the number. It's a .64-mile
21 radius, which is about one kilometer.

22 Q. But what I'm saying is if you envision a point,
23 this point right here where we are now, and you drew a
24 line from here 500 meters in a circle, right, that would
25 be 1000-meter-in-diameter circle, right?

1 A. Right.

2 Q. And that's more than a half a mile circle, is
3 it not? There is like 1700 --

4 A. That's about two-thirds of a mile.

5 Q. Yeah, that's about a two-thirds of a mile
6 circle?

7 A. Right.

8 Q. So are you saying that the -- there is only a
9 50 percent chance that the lightning is within that
10 circle?

11 A. It's a different way of looking at it than
12 having a circle --

13 Q. I understand that.

14 A. -- measurement.

15 Q. I'm just trying to understand what you mean
16 because I didn't really understand it, what you mean
17 that there is a 50 percent chance that the lightning
18 strike is more than 500 meters from that lightning bolt?

19 A. It's actually the error of the measurements
20 from past studies, from all these ground truth studies,
21 finding that half of them are within 500 yards or
22 500 meters and the other half are further than that.
23 The ones that are further away become -- large distances
24 become less and less likely.

25 Q. I understand.

1 A. So it's actually clustered toward the smaller
2 values. That's why there is a -- appears to be a
3 mismatch between these -- this 99 percent. But they do
4 match out. This has been worked out very carefully. I
5 don't understand it either.

6 Q. I have no doubt you've matched it out, but I'm
7 just trying to figure out that if what you are saying is
8 there is a 50 percent chance that -- studies have shown
9 that there's a greater than 50 percent chance that a
10 lightning strike is more than 500 meters from that
11 yellow lightning bolt in the map?

12 A. It's 50 percent.

13 Q. 50 percent chance. Okay. So you've talked
14 about lightning strokes that are detectable, correct,
15 throughout your testimony?

16 A. Correct.

17 Q. What is the percentage of lightning strokes
18 that are detected?

19 A. Okay. There's three things called detection
20 efficiency, DE. It's very well known. Thunderstorm
21 detection efficiency, let's start with the biggest
22 thing, you have multiple strokes in a storm, that's
23 virtually 100 percent. It's more than 99 percent. We
24 basically never miss a thunderstorm.

25 Now, in a thunderstorm there are these flashes,

1 which are the big events, the whole event, including the
2 thunder and so on. That detection efficiency is -- I
3 think in 2006 was about 90 percent. So we detect 90
4 percent of the flashes with -- now, when you go down to
5 the strokes, let's say there is four strokes in a flash,
6 we detect 70 percent of the strokes. So we might miss
7 one out of the four strokes in a flash. So we got three
8 out of the four. And they are closely clustered in time
9 and space.

10 Q. As you've indicated, each of these strokes
11 could be dangerous and could start a fire?

12 A. Correct.

13 Q. And that you are saying in effect you miss, in
14 a storm, of the cloud-to-ground ones, which are the ones
15 we're concerned about, you only detect about 70 percent
16 of the lightning strokes from the cloud to the ground?

17 A. Correct.

18 MR. MATASAR: That's all I have.

19 CROSS-EXAMINATION

20 BY MR. BLACKMAN:

21 Q. I shouldn't ask you anything, but I was -- I am
22 still really confused about the difference between the
23 probability that the stroke is where it's recorded and
24 then the confidence circle. Okay.

25 Isn't that -- wherever the stroke is recorded,

1 that there is a 50 percent chance that that stroke is
2 within a diameter of 1000 meters?

3 A. Correct.

4 Q. Okay. And then is it also true that if you
5 take that 1000 meters and try to figure out how likely
6 it is to be in a particular location, then you would
7 have this 99 percent probability that it's within that
8 1000-meter-diameter circle?

9 A. Yes. I think the part that we're not seeing
10 here is that some of these locations aren't circular.
11 They are very large. They are very long. Sometimes 10
12 or 20 miles long. We don't -- we only have a few of
13 those. We don't have those plotted on here. That's
14 what helps contribute to these measurements coming out
15 that -- it appears not to match. But we're seeing the
16 best ones here because almost all of them in this
17 particular storm were well located.

18 The ones that we're not showing here in other
19 studies and other places and other days can be very
20 large. And those are the ones that have the long
21 distances.

22 Q. Okay. Then my only other area -- and I try to
23 only ask a couple of questions. The confidence level
24 that you have developed about the location is based, as
25 I understood what you were saying, in part anyway,

1 sending graduate students out and actually looking for
2 evidence on the ground of where the --

3 A. No.

4 Q. -- lightning hit the ground?

5 A. No, not looking for evidence on the ground.
6 They are looking at camera studies. They have the angle
7 from two different cameras and they can locate the
8 channel of the lightning very accurately, and then
9 compare that back to the network. Nothing on the ground
10 is looked at.

11 Q. Okay. So, for example, if the data that is
12 developed by this system places a lightning stroke in a
13 particular area with all these probabilities of accuracy
14 and all that stuff, and somebody had looked at the area
15 the day before, the week before, and there was no
16 evidence of recent -- of a lightning event in that area,
17 and then after that event went and found clear evidence
18 that lightning had struck a tree, for example, and that
19 tree was outside one of these confident circles or this
20 500 yards or meters, whatever, that would indicate that
21 the data was not quite right because clearly the
22 lightning had struck the tree, tree is outside the
23 circle, but the tree was struck during this storm; is
24 that fair?

25 A. Well, there is a number factors involved in

1 there. It's getting into some conjecture but you -- the
2 network picks up 70 percent of strokes. And there could
3 have been a stroke, which is usually near another one,
4 that came to ground and just wasn't one of those that
5 was picked up by the network. Typically they cluster
6 close together. And if we miss one out four, one of
7 those could have been one of those that was missed.

8 Q. So just to maybe oversimplify it, if there were
9 116 actually recorded, then at least based on the
10 standard error rate that you've talked about, there were
11 likely to be another 34 or so?

12 A. Something like that, on the average. These
13 data were developed in Florida and other places. And we
14 can't necessarily apply them to another place and
15 another storm and another time. The network has
16 different performance on different days and different
17 locations and different storms. So on the average, that
18 would be the number, but we can't really verify that.

19 Q. I understand we can't verify it, but that's
20 what that 70 percent means?

21 A. That would be a typical long-term average,
22 which may or may not apply in this particular case.

23 MR. BLACKMAN: That is all. Thank you.

24

25

1 REDIRECT EXAMINATION

2 BY MS. SGARLATA:

3 Q. Mr. Holle, how closely related in time and
4 space are the strokes that we're talking about in this
5 particular case?

6 A. You can look at the raw data, and see the
7 timing. And if you look at the time of the strokes in
8 the flash -- remember the phrase? A flash has one or
9 more return strokes. You can actually see, for example,
10 the flash hits at 3:15:00, point -- the next, then there
11 will be another one 3:15:01, that belongs to the same
12 flash. There will be one at 3:15:02. Those are three
13 strokes in the same flash. You can actually see it very
14 clearly in the data. It's not a real active storm that
15 these -- all these strokes have occurred within the same
16 one.

17 The typical distance of a stroke from one
18 stroke to the next, half of them are within half a mile.
19 And most of them are within one to two miles, if I
20 remember the numbers correctly. So they're usually
21 quite close together in time and space.

22 Q. I'd ask Ms. Root to put on the projector over
23 here what's labeled Defense Exhibit 1139. It's page 2
24 of 8. And I'd ask her to -- thank you very much.

25 So have you seen this document before?

1 A. Yes, I have.

2 Q. And is this essentially -- is this similar to
3 what you're talking about showing the time and location
4 of the strokes in question?

5 A. Yes. There are a couple of them that -- in
6 here -- where did it go? It's not very bright. There
7 we go. You can look at this -- oh, boy, which one was
8 it? Here's one right here, 15:31:31.503 and .7 seconds.
9 They are typically about a tenth of a second apart. So
10 these are the same flash, two strokes in the same flash.

11 Here's one here that's not correlated. And
12 then you go on down here. And there is another one at
13 18.8 seconds and then 8.8 -- 18.833 seconds, 18.876
14 seconds --

15 THE COURT: Thank you. Let's go on to the
16 next.

17 THE WITNESS: So those are the kind of things
18 that show up.

19 MS. SGARLATA: Thank you. No further
20 questions.

21 THE COURT: Anything further?

22 MR. MATASAR: No.

23 THE COURT: You may step down, sir.

24 Call your next witness, please.

25 MS. SGARLATA: The government would call Jeff

1 Rose.

2 (The witness was sworn.)

3 THE CLERK: There is water if you would like
4 some.

5 Please state your full name and then spell your
6 name for the record.

7 THE WITNESS: Jeffrey Rose, R-O-S-E.

8 THE REPORTER: And how do you spell Jeffrey?

9 THE WITNESS: J-E-F-F-R-E-Y.

10 DIRECT EXAMINATION

11 BY MS. SGARLATA:

12 Q. Mr. Rose, can you tell us where you are
13 employed?

14 A. I am employed with the Bureau of Land
15 Management in Burns, Oregon.

16 Q. How long have you been so employed?

17 A. I have been in my current position since March
18 of this year, but I was in a detail since March of the
19 previous year, in that current position.

20 Q. And what is your title or what is your job?

21 A. I'm the associate district manager for the
22 Burns District of BLM.

23 Q. And that's since earlier this year?

24 A. Since earlier this year. Officially early this
25 year, full-time.

1 Q. What was your title before that position?

2 A. Before that position, I was the restoration
3 reclamation coordinator for Eastern Oregon for the
4 Bureau of Land Management working for the Portland
5 office but stationed in Burns.

6 Q. Okay. Have you ever been a fire ecologist?

7 A. I was the fire ecologist on the Burns District
8 from October 1999 to May 2008.

9 Q. What is a fire ecologist?

10 A. As a fire ecologist I'm responsible for
11 assisting the fuels and fire management program and
12 setting direction and evaluating the effects of
13 prescribed burns and wildfires, both in the --
14 evaluating the vegetation before and after the fires.

15 Q. Can you tell us a little bit about -- what's
16 your education?

17 A. I have a bachelor's in biology from a small
18 school in South Dakota, Yankton College. I have a
19 master's in rangeland resources from Oregon State
20 University.

21 Q. And have you been involved in any publications
22 in your career?

23 A. I have a number of publications. I was a
24 research associate at the Eastern Oregon Agriculture
25 Research Center in Burns. I was an Oregon State

1 University employee following my master's work.

2 Q. What is the Eastern Oregon Agriculture Resource
3 Center in Burns?

4 A. The Ag. Research Center there in Burns is a
5 joint Oregon State University branch experiment station,
6 but they also are a USDA -- U.S. Department of
7 Agriculture ag. research service experiment station.
8 And they are co-located and operate together. And their
9 main emphasis is agricultural research looking at
10 sagebrush and juniper plant communities and vegetation.
11 And they also do a lot of livestock production type of
12 work, mainly cattle.

13 Q. Okay. And looking to your left, do you see an
14 exhibit on the easel there?

15 A. Yes, I do.

16 Q. Can you tell us that exhibit number, please?

17 A. Exhibit Number 2, this right here.

18 Q. Yeah, above that in the yellow -- on the
19 sticker.

20 A. Can I stand up and use my bifocals?

21 Q. Please.

22 A. 030.

23 Q. Okay. Are you familiar with the general area
24 depicted in that exhibit?

25 A. Yes, I am.

1 Q. And how familiar are you with that area?

2 A. I've worked there as part of the ag. research
3 service and Oregon State University, I did some research
4 plots in there. And then since coming to BLM, I've
5 worked on some projects in that area.

6 Q. What kind of research did you do in this area?

7 A. We started out looking at the effects of
8 juniper, western juniper, and -- everything from trying
9 to figure out the population dynamics, how to grows,
10 where it grows, how long -- how old is it, and what
11 affects it, and why does it grow in certain locations.

12 We also looked at the effects of fire on the
13 sagebrush and the grasses after we do a treatment in
14 those areas.

15 Q. Is sagebrush important to this area?

16 A. Sagebrush is very important for a number of
17 reasons in these areas.

18 Q. Can you tell us some of those reasons.

19 A. It's a -- in this part of the mountain, it's --
20 sagebrush dominates the area. It's very common. It's
21 very obvious.

22 It also is important for a lot of wildlife
23 species in the area. Mainly in this area sage grouse is
24 one of the main species, but it's also important for
25 mule deer and antelope and elk kind of wander down there

1 every once in a while.

2 Q. Can you tell us why sagebrush is important to
3 sage grouse, mule deer, antelope and elk?

4 A. For sage grouse it's -- they -- that -- it's a
5 bird. And it relies on it for a large part of its life
6 cycle. It nests underneath it. It eats sagebrush in
7 the wintertime when other things aren't available. It
8 provides cover, hides from predators.

9 Mule deer, similar. They'll eat some of it.
10 Mainly it's a habitat, a place for them to hide, place
11 for them to raise their young in.

12 Q. Okay. And what happens when fire burns
13 sagebrush out of an area, typically? Do sagebrush come
14 back and re-inhabit the area soon thereafter?

15 A. Sagebrush is killed outright by fire. And it
16 only reestablishes by seed from the area. So it takes a
17 while for it to move into an area. As opposed to a
18 grass plant which sprouts from underneath and grows
19 right back, and the next year you'll have it come back.

20 Q. Is there any particular interplay between the
21 role -- or between the establishment of say juniper
22 and -- so when fire covers an area like this that's
23 typically covered in sagebrush and no seeds are planted
24 to replace the sagebrush, does juniper then start to
25 play a certain role?

1 A. Yeah. Juniper in this area is actually
2 moved -- has increased in its density and cover in the
3 last 120 years. And we worked on some of that research
4 at the experiment station. And we found that it
5 displaces sagebrush in some areas. So when the
6 sagebrush leaves, it changes the dynamics of community
7 plants. And it open ups bare ground, it opens up for
8 weed encroachment. It also increases the amount or the
9 potential for erosion, the soil washing away. It also
10 removes that important plant for habitat for the
11 animals.

12 Q. What's wrong with weed encroachment?

13 A. Well, weeds, there is some other weeds,
14 primarily in some of these areas, they are cheatgrass
15 or -- it's an annual -- introduced annual grass will
16 establish, and it basically limits the establishment of
17 desirable plants, perennial plants, native plants that
18 we have in the area.

19 Q. Is there a wilderness study area in this
20 vicinity?

21 A. Yes. In -- on the map, it's wilderness study
22 area is in spots north of the road. And I'm not sure
23 where the boundary is but there is what we call WSA in
24 this area.

25 Q. And what is a wilderness study area?

1 A. A wilderness study area is a classification
2 that was established in the '80s. And there were areas
3 that are under consideration for being classified or
4 established as wilderness, but we're studying them.
5 We're seeing if those characteristics are required or
6 present, so you can basically make it wilderness.
7 Congress makes it wilderness.

8 Q. Directing your attention to Exhibit 71 on the
9 projector, and I'd ask Ms. Root to actually back out a
10 little bit and to enlarge, if possible, more like that.
11 To show both -- yeah.

12 So do you see on this map in black font, sort
13 of yellow highlight, both USA wilderness study area and
14 USA Steens Mountain wilderness?

15 A. Yes, the wilderness study areas are north of
16 the Loop Road. And then there is wilderness south of
17 the Loop Road.

18 Q. What is the difference between Steens Mountain
19 wilderness versus a US wilderness study area?

20 A. The south of the road it was in the Steens Act,
21 Congress established what we would call true wilderness,
22 which has a classification of certain things we can and
23 can't do there. So it basically limits some of the
24 activities we can do.

25 Q. All right. As opposed to the wilderness study

1 area?

2 A. Wilderness study area, we still get in -- for
3 example, in the wilderness we're not, unless it's an
4 extreme emergency situation, allowed to drive a vehicle
5 or operate machinery in the wilderness. North of the
6 Loop Road in the WSA, we're allowed to drive on the
7 roads and to operate machinery in that area.

8 Q. Okay. And are you familiar with the USA
9 Malheur National Wildlife Refuge?

10 A. Yes, I am.

11 Q. What is a wildlife refuge.

12 A. The wildlife refuge -- and I believe the
13 Malheur National Wildlife Refuge was one of the early
14 refuges established. And it's another department in the
15 Department of Interior, or another group in the
16 Department of Interior. Their main mission is to
17 enhance wildlife habitat and wildlife populations. So
18 it's -- their mission is a little bit different than
19 ours.

20 Q. Now, directing your attention in particular to
21 August 2006 and the areas depicted on this map. Were
22 you working for the BLM at that time?

23 A. I was. I was the fire ecologist in 2006.

24 Q. So are you familiar with the fact that there
25 was a fire up at Krumbo Butte, a fire at what's marked

1 Lower Bridge Creek and fire at what's marked Grandad?

2 A. Yes, I was.

3 Q. Now, were you involved in the response to that
4 fire, BLM's response with respect to the land?

5 A. I was involved in the early stages of the fire.

6 Q. Can you tell us what BLM -- how BLM responded
7 after these fires occurred?

8 A. Could you rephrase that?

9 Q. With respect to plants, animals, and what have
10 you --

11 A. Oh, as -- even as the fire is going on is we --
12 we have folks that come on, we call them resource
13 advisors. And they are assigned to the fire. Usually
14 they are a resource person from the District. Could be
15 a range conservation specialist, could be a wildlife
16 biologist, would even be an archeologist somebody who
17 has a background in some of the resources that we
18 manage. And we have them get in contact the incident
19 commander and some of the folks that are actually
20 suppressing the fire.

21 And when the fire going on, we'll even start to
22 evaluate what needs to be done following the fire. Is
23 the vegetation being damaged? Are structures being
24 damaged? Or are facilities -- some kind of a --
25 something that we've built being damaged that needs to

1 be replaced. So these groups get together and start
2 forming an initial plan on how we're going to respond
3 after the fire is out to try to fix some of the issues
4 the fire has caused.

5 Q. And were you involved in that process or the
6 groups you worked for?

7 A. Yes, I was. I was part of the group that -- we
8 call it the -- it's a BAER team, burned area response
9 team. And they come in. And it's a Department of
10 Interior team that comes in and helps us establish what
11 needs to be done and do a plan for what's going to be
12 done after the fire.

13 Q. So were there things that needed to be done by
14 a BAER team after the August, September 2006 fires?

15 A. Yeah. Through the evaluations we did, we
16 determined that some fences were damaged. We determined
17 that some seeding needed to occur. Some areas where
18 there was vegetation or plant mortality. Plants were
19 killed over a significant area that we had to put some
20 seed back on the ground. We also tried to put some
21 structures in to control sediment movement or soil
22 erosion across the surface.

23 Q. Why is it necessary to control sediment erosion
24 across the surface.

25 MR. BLACKMAN: Your Honor, I'm going to object

1 on relevance grounds.

2 THE COURT: Sustained.

3 BY MS. SGARLATA:

4 Q. Were fences damaged in the fires in
5 August 2006?

6 A. Yes, there were. There were evaluations done
7 and some fences were damaged.

8 Q. And did those fences need to be replaced?

9 A. Yes. The -- some of the metal was actually --
10 tensile strength was lost and -- was one of the things.
11 Wooden fence posts are real commonly burned up and we
12 had to replace those.

13 Q. So now directing your attention in particular
14 to the location which is labeled Krumbo Butte Fire, and
15 I'd ask Ms. Root to enlarge in that area if she would
16 thank you. Were some of the fences you're talking about
17 that were damaged, were they in the general vicinity of
18 the Krumbo Butte Fire?

19 A. Yes, they were.

20 Q. And did you personally go to those locations?

21 A. I did personally go to part of Krumbo Butte and
22 look at some of the damage.

23 Q. Okay. And what needed to be done to -- in
24 response to the damage?

25 A. I don't --

1 MR. SCHROEDER: I'd object as to the foundation
2 as to which fences and who owns the fences.

3 THE COURT: Sustained.

4 BY MS. SGARLATA:

5 Q. Which fences?

6 A. We concentrated on just the BLM, what we call
7 BLM fences, pasture or allotment fences.

8 Q. And do you have a laser pointer up there --

9 A. I do.

10 Q. -- in front of you. Can you point out which
11 fences you are talking about?

12 A. They would be the -- these fences that form
13 these lines in this -- this is the primary fence that we
14 worked on.

15 Q. So is that BLM land that you just pointed to?

16 A. Yes.

17 Q. How much did it cost to fix those fences?

18 MR. BLACKMAN: Objection, irrelevant.

19 THE COURT: Overruled.

20 BY MS. SGARLATA:

21 Q. You may answer.

22 A. Okay. That one was not that expensive. There
23 wasn't a lot to do. I believe we spent about \$877 on
24 that fence.

25 Q. And was that for fence materials, for labor,

1 how was that?

2 A. For materials and labor on that.

3 Q. Okay. Did -- were there other expenses
4 incident to repairing fences in the location that you
5 just pointed to on the map on Krumbo Butte?

6 A. Yes. There were planning -- what we call
7 planning -- the BAER team was -- there was a cost to
8 bring them in, so that was about a \$600 cost.

9 Q. Now, how do you know how much those costs were?

10 A. We -- there was -- the -- we called it the
11 South End Complex, emergency stabilization plan, it was
12 a very large plan because it encompassed a number of
13 fires that occurred at that area. We tried to be
14 efficient and lumped the plans together instead of doing
15 a number of small plans. We did one big plan. And so
16 we took the total number of acres from the fire and
17 divided by the total cost of what the plan cost was for
18 that fire.

19 Q. And how does the BLM keep track of the costs
20 for a particular event? How do you know when money is
21 being spent to -- at a particular location, for example,
22 Krumbo Butte?

23 A. The folks code -- the Krumbo Butte fire had a
24 specific fire code. And when you were working on that,
25 you would charge your time to that specific fire code.

1 Q. Okay. And how do you know that people charged
2 their time properly to codes?

3 A. It's part of the supervisors and their
4 supervisors, there are checks and balances that we have.

5 Q. Okay. And other than supervisors, is there any
6 level of review to that particular action?

7 A. Periodically they'll come and do audits and
8 look at that -- an outside group, a state office, which
9 is in Portland, or even a national office from either
10 Washington, D.C. or from NIFC, which is the Fire --
11 National Interagency Fire Center. It's basically the
12 Washington office for fire, state office.

13 Q. Why did fences need to be put back or repaired
14 on Krumbo Butte?

15 A. It -- the fences help us control livestock in
16 the area and help us improve plant response after, so if
17 we can control livestock, we can make sure that they
18 stay out of areas that are recovering.

19 Q. I see. So now I would ask Ms. Root to zoom
20 back out on this exhibit and then zoom into the Lower
21 Bridge Creek and Grandad area, to the extent possible.
22 So maybe like this square like this.

23 Are you familiar with this area depicted in the
24 map?

25 A. Yes, I am.

1 Q. And were you involved at all in any responses
2 or -- yeah, in responding to effects -- to these
3 particular areas that appear to result from the fires?

4 A. On this part of the fire, I actually did work
5 with the BAER team on some of the evaluations following
6 the fire. And then during the ES, the emergency
7 stabilization rehab work, I was on the field and did
8 some site visits, and then monitoring after some of the
9 treatments to measure the plant response, which is part
10 of my fire ecology job.

11 Q. Why did those things need to be done?

12 A. We wanted to see if we achieved our goals from
13 the plan, just to check to see if we did what we thought
14 we'd do.

15 Q. Were there any fence repairs that took place in
16 the Lower Bridge Creek Fire area depicted on this map?

17 A. Yes. Most of it -- most of the interior fences
18 were hiked by a crew. And when they found an area that
19 needed to be repaired, they repaired those fences.

20 Q. And how much did it cost to repair those
21 fences?

22 MR. BLACKMAN: Same objection, Your Honor.

23 THE COURT: Overruled.

24 THE WITNESS: The Lower Bridge Creek Fire was a
25 little bit bigger deal, and in the area that -- the

1 total cost of fence repair was \$38,400.

2 BY MS. SGARLATA:

3 Q. Can you say that again?

4 A. \$38,400 -- I'm sorry, \$406.

5 Q. \$38,406 for fence repair in the Lower Bridge
6 Creek area. Now, is that just for the costs of
7 materials or is that labor as well?

8 A. That was the labor cost. The material cost was
9 \$10,956 for fence material.

10 Q. And what kind of materials are those?

11 A. It was a combination of barbwire, smooth wire,
12 fence posts, fence clips, wooden posts, and they're all
13 parts of what we needed to put the fence back together.

14 Q. And were there any other costs incurred in
15 order to repair those fences?

16 A. No. That was the main -- the larger pieces
17 that we did.

18 Q. Why did fences need to be repaired? Why
19 couldn't it just be left as it was?

20 A. There were some holes in the fence. Livestock
21 could move through the fence. And we wanted to make
22 sure -- again, to help facilitate recovery of the site,
23 we wanted to make sure we could control livestock in the
24 area. So once they come back in, they wouldn't be in an
25 area that needed to be recovering, the plants needed to

1 recover.

2 Q. So was there seeding also done in this area in
3 response to the fires?

4 A. We did do a seeding -- we did a couple of
5 seedings. We did a seeding right off of Loop Road here.
6 And then we did a -- kind of in this area here, we did a
7 seeding in the Mud Creek/Bridge Creek area.

8 Q. Why did you do those seedings?

9 A. The post-fire evaluation indicated there was
10 high plant death in that area. So we wanted to put
11 some -- try to put some perennial -- desirable plants
12 back in the area.

13 Q. Why was that necessary?

14 A. To protect the soil -- mainly to protect the
15 soil resource. Also, to kind of give the recovery a --
16 kind of a shot in the arm, a jump start, to get it -- so
17 that it doesn't have to start from ground zero, bare
18 ground.

19 We also used it to hold the soil in spots, so
20 you reduce erosion over time.

21 Q. And why is erosion undesirable, if at all?

22 A. Well, it would -- with the soil movement, you
23 get -- it gets down to the streams, damage fish habitat,
24 riparian areas. And, of course, it could go straight
25 downhill to the refuge where there is some -- they have

1 some fish that they manage for us down there, and it
2 would just kind of clog up their system.

3 Q. So were there costs incurred in order to reseed
4 the area where the plants had died in the fire?

5 A. Yes, there was. The -- we spent on the mud --
6 or the Mud Creek/Bridge Creek area here, we spent
7 \$62,253 on that --

8 Q. Is that for -- I'm sorry?

9 A. -- kind of -- no, that was it.

10 Q. Was that for the cost of seeds or seeds plus
11 labor?

12 A. That was seeds, labor, and we had to rent
13 tractors, large tractors, to pull the rangeland drills
14 that we have to seed with.

15 Q. What portion of that expense was incurred
16 because of the tractors?

17 A. Tractor costs were -- it was a \$21,000 cost for
18 tractors.

19 Q. And those tractors were rented from some sort
20 of --

21 A. We picked them up local from a dealer we had
22 there.

23 Q. And with this -- the seeding that was done, who
24 decided what seeds should be put down on the ground
25 here?

1 A. We worked with, again, the BAER team, and we
2 worked with the local range folks, and I helped decide.
3 And we picked some native species -- because it was a
4 wilderness study area, we're limited to what we can put
5 back in there. We have to concentrate on native or
6 plants that are from the area.

7 Q. Who makes -- who limits you in that regard?

8 A. It's a regulation that we have. It's a rule
9 that we have in the BLM. It's part of the WSA
10 regulations that we have to follow.

11 Q. So you helped select the kinds of seeds that
12 were going to be put down here?

13 A. Correct.

14 Q. And can you tell us what some of those seeds
15 were and why they were chosen?

16 THE COURT: We've been over this. Go into
17 something else.

18 BY MS. SGARLATA:

19 Q. Okay. In order to determine what needed to be
20 reseeded, were there satellite images of burned plants
21 used?

22 A. There were satellites areas of the burned area
23 that we looked at to try to evaluate where we would
24 potentially have hot spots or areas of high mortality or
25 plant death.

1 Q. And was the primary goal in reseeding the area
2 to establish plant cover to protect the soil?

3 A. Correct.

4 Q. Were you able to put down seeds for sagebrush?

5 A. We looked at sagebrush seed and the costs of
6 the sagebrush seed is very high, and also our success in
7 seeding has been very low in the past, so we chose not
8 to put that money into that.

9 Q. Okay.

10 A. That effort.

11 Q. Directing your attention to the lower -- do you
12 see the area just north of where it says "August 22
13 black line operations, Toney"?

14 A. Right there (indicating).

15 Q. Yeah. Are the costs of reseeding or
16 rehabilitating that land included in any of the numbers
17 you gave us?

18 A. No. The costs of that seeding was \$34,664.

19 Q. And that was a separate expenditure that is not
20 included in any of the numbers you just told us about?

21 A. Correct.

22 MS. SGARLATA: Okay. No further questions.

23 THE COURT: Cross.

24

25

1 CROSS-EXAMINATION

2 BY MR. SCHROEDER:

3 Q. Mr. Rose, good morning.

4 A. Good morning.

5 Q. My name is Alan Schroeder. I represent Steve
6 Hammond. I have a few questions for you. You spoke
7 about wildlife. And do you agree that at least in the
8 State of Oregon that wildlife is the property of Oregon?

9 A. I believe that's the rule, yes.

10 MR. SCHROEDER: Okay. As a matter of fact, I
11 think the court could take judicial notice of Oregon
12 Revised Statute 498.002(1), which states wildlife is the
13 property of the state, end quote, Your Honor.

14 THE COURT: Thank you.

15 By MR. SCHROEDER:

16 Q. At the time you were doing your review of this
17 2006 event relative to the Krumbo Fire and the Lower
18 Bridge Fire and the Grandad Fire, were you a state
19 certified general appraiser in Oregon?

20 A. No.

21 Q. In making your assessment of the costs
22 associated with this, are you generally aware of the
23 different type of appraisal methods that exist?

24 A. No.

25 Q. So you are not aware of the three general

1 methods of, like, a cost approach, a comparison
2 approach, or an income approach, are you not familiar
3 with those approaches?

4 A. No.

5 Q. So I take it, then, that you are not familiar
6 with the Uniform Standards of Professional Appraisal
7 Practice?

8 A. No.

9 Q. And you didn't apply any of those standards in
10 preparing any report that you're testifying to today; is
11 that correct?

12 A. No. That's correct.

13 Q. Now, as employee -- as a matter of fact, you're
14 the associate district manager position of the Burns
15 District right now; is that correct?

16 A. Correct.

17 Q. You are aware that in the grazing rules there
18 is the standard called the fundamentals of rangeland
19 health standards, are you aware of those?

20 A. Correct, yes.

21 Q. Can you tell me what those are?

22 A. They are a set of criteria that we use and
23 designed to be done in the field to evaluate the health
24 of the rangeland, how well the ecology is working, how
25 well the hydrology is working, how well all the pieces

1 of that area are functioning based on a standard that's
2 established for different areas based on the plants in
3 the community.

4 Q. And while those rules are within the grazing
5 rules, they don't necessarily limit themselves to
6 evaluation of livestock but relate to certain standards
7 like watershed, I believe that's standard 1; watershed
8 functions, which is standard 2; ecological processes,
9 which is standard 3; water quality, which is standard 4;
10 and native and threatened and endangered and locally
11 important species, which is standard 5, would you agree
12 with that?

13 A. I'd have to look at the guide, but that -- it
14 sounds familiar, yes.

15 Q. Let's not take my word for it. You are
16 familiar with the Andrews Resource Management Plan and
17 the Steens Mountain Resource Management Plan, aren't
18 you?

19 A. Yes.

20 Q. As a matter of fact, those are the land use
21 planning documents that cover a larger area but
22 certainly cover the four grazing allotments or portions
23 of the four grazing allotments that the Hammonds have;
24 would you agree with that?

25 A. Yes.

1 Q. Madam Clerk, could you show Mr. Rose pages G4,
2 G5, G6, G7, G8 and G9, and just conform for me,
3 Mr. Rose, that those are the five standards of rangeland
4 health that we've talked about here.

5 A. Are these the ones you just read?

6 Q. Yes, sir.

7 A. Okay. And based on when this was published,
8 those are the standards.

9 Q. And those were the standards in effect as of
10 July 2005 and remain effective to this day, correct?

11 A. Yes, correct, based on the RMP.

12 Q. Yes. Thank you. Now, do you know in your
13 preparation for your testimony here today that the
14 Bureau of Land Management did a fundamental range on
15 health determination for the Hardie summer allotment and
16 for the Mud Creek allotment?

17 A. I did not know that they -- I knew they'd been
18 done. I don't know what the results are.

19 Q. Okay. But the idea of the fundamentals of
20 rangeland health determination is it's the BLM's going
21 out on the ground, collecting information, assessing
22 that information relative to each of the five standards
23 that you and I have just gone over, and making a
24 determination whether or not that standard has been
25 achieved or not; is that a fair summary?

1 A. Yes.

2 Q. Now, I show you (brief pause) -- I show you an
3 exhibit in this case, which is the summary sheet for the
4 Hardie summer allotment. Do you see that? It's
5 Exhibit 1201. Have you ever seen that document before,
6 Mr. Rose.

7 A. I don't remember.

8 Q. Okay. But you as the associate director or
9 associate district manager for the Burns District know
10 that this is a common type of a document that the BLM
11 will prepare to make an evaluation of allotment and
12 report determinations of fundamentals of rangeland
13 health?

14 A. Could you restate that for me?

15 Q. Sure. This certainly is a document published
16 and reported out of your office --

17 A. Sure, yes.

18 Q. -- the Burns BLM District?

19 A. Correct, yes.

20 Q. This is not a document that Hammonds or Alan
21 Schroeder has prepared?

22 A. No, no.

23 Q. So this is a document prepared in the ordinary
24 course of business of the BLM District office, correct?

25 A. Correct, correct.

1 Q. And, in fact, on page 18 of this report, it's
2 not very clear, it shows up there on top very vaguely,
3 but maybe I should show it to you and have Madam Clerk
4 show it to you, but it identifies the team participants
5 associated with this allotment evaluation. Do you see
6 those signatures?

7 A. Yes.

8 Q. Let me just have the -- Madam Clerk show you
9 it, but before she shows it to you, there are signatures
10 by the natural resource specialist, the ecologist, the
11 fish biologist, the lead range management specialist,
12 the recreational planner, the specials areas
13 coordinator, the supervisory range resource specialist,
14 the T and E, which is threatened and endangered plant
15 coordinator, the weed coordinator, the wildlife
16 biologist, and then finally by the field manager, all of
17 which these signatures are in September 25, 2007. Can
18 Madam Clerk show you Exhibit 1201, page 18.

19 A. Okay.

20 Q. And will you agree that those are the
21 signatures of people within your employ or the BLM's
22 employ as of 2007 that signed that document?

23 A. Yes.

24 Q. Thank you. And so given this document, looking
25 at Exhibit 1201, at least as it relates to the Hardie

1 summer allotment, the BLM had determined that relative
2 to watershed functions as of the signing of this
3 document, which, again, was in that September 2008 -- or
4 2007 date, that watershed functions achieved, watershed
5 function was achieved, ecological processes was
6 achieved, water quality was achieved, and native and
7 special status and locally species was achieved,
8 correct?

9 A. Yeah, that's what it says.

10 Q. And so that was determination by the Bureau of
11 Land Management of the Burns District office, correct?

12 A. By that team, yes.

13 Q. Now, I want to show you Exhibit 1202. And this
14 relates to the Mud Creek allotment. Now, this is a
15 little bit different document, is it not, Mr. Rose?

16 A. I'm not familiar with that at all.

17 Q. Okay. This is a determination for standards of
18 rangeland health and guidelines for livestock management
19 for Oregon for allotment 6005 of the allotment, Mud
20 Creek?

21 A. Okay.

22 Q. Are you familiar with that form of the Bureau
23 of Land Management?

24 A. I -- no. This is not something that I would
25 usually work with. I've never seen this before.

1 Q. So you've never seen this kind of document
2 before?

3 A. I don't remember seeing this, no.

4 Q. Okay. Could you go to the second page of that
5 document, do you recognize the signature of the person
6 that's signed that?

7 A. At the very bottom?

8 Q. Yes, sir.

9 A. Karla Bird.

10 Q. And who was she?

11 A. At that time she was the area manager or the
12 field manager.

13 Q. So the area manager would be the manager or the
14 authorized representative of the Bureau of Land
15 Management in Burns District relative to the Mud Creek
16 allotment as of May 29, 2007?

17 A. Yes.

18 Q. Now, similar to the determination document we
19 discussed about in 1201, you are not familiar of this
20 document being similar in making a determination as to
21 the five standards we've gone through?

22 A. I don't remember seeing this form before.

23 Q. Okay. But would you agree that this is a
24 document of the Bureau of Land Management?

25 A. It could be, yes.

1 Q. Well, it was signed by Karla Bird, wasn't it?

2 A. Yes.

3 Q. And she was an employee of -- as you've already
4 mentioned -- of the Burns District as of May 29, 2007?

5 A. Yes.

6 Q. And in this, she checkmarks as to watershed
7 function standard 1, that that standard was achieved,
8 correct? Looking down on the first page --

9 A. Yes.

10 Q. -- of Exhibit 1202. And standard 2, relating
11 to watershed functions, was achieved, correct?

12 A. Correct.

13 Q. And that standard 3 relating to ecological
14 process, the standard was achieved, correct?

15 A. Correct.

16 Q. And the standard dealing with water quality,
17 the standard was achieved, correct?

18 A. Correct.

19 Q. And the standard relative to native and T and E
20 species and locally important species, the standard was
21 achieved, correct?

22 A. Correct.

23 Q. And so this represented the BLM's determination
24 relative to the public land within the Mud Creek
25 allotment, correct?

1 A. For the range program, correct.

2 Q. Okay. Now, you talked -- beyond the lack of
3 your appraisal report, you made certain statements
4 regarding costs. I want to ask you about that. Now, do
5 you know that at least the Krumbo Fire and the Lower
6 Bridge Fire and the Grandad Fire, there were lightning
7 strokes, ignitions associated with each of those fires?

8 A. Yes.

9 Q. And, in fact, in terms of the Grandad Fire
10 specifically, there has been testimony about certain
11 ignitions, and they've been calling them, just as a
12 matter of convenience, Ignitions 1 through 10, do you --
13 are you familiar with that?

14 A. Yes.

15 Q. And, in fact, Trail Fires 1 through 7, I think
16 that's an additional separate fires they are talking
17 about; is that right?

18 A. I'd have to look at the map, but, yeah.

19 Q. But that's your understanding anyway?

20 A. Correct.

21 Q. Now, in your allocation of costs, did you make
22 any allocation as to those costs associated with
23 Ignitions 1?

24 A. On -- no, not specifically with Ignition 1.

25 Q. Okay. How about Ignition 2?

1 A. No.

2 Q. How about Ignition 3?

3 A. I'd have to look to see which ignitions those
4 were.

5 Q. Well, I guess you need to tell me in terms of
6 your report, you just testified to a lump number of
7 costs, and I'm just asking you -- and I guess I'll just
8 do it in a summaril (sic) form, did you do it for each
9 of these 1 through 10 ignitions?

10 A. No. But if we had the location, we -- you
11 could do it as a percentage -- you could do that
12 calculation. We just didn't do that at the time that we
13 did the project.

14 Q. Okay. But in terms of your testimony here
15 today, the opinions you are expressing on the stand
16 today, you didn't make these allocations?

17 A. No.

18 MR. SCHROEDER: Thank you, Mr. Rose.

19 CROSS-EXAMINATION

20 BY MR. BLACKMAN:

21 Q. Just -- I think -- there has been some
22 confusion about terms, so I want to clarify. When you
23 were talking about Grandad and when you were doing your
24 allocation or your computations, the Grandad covered the
25 area from Lower Bridge Creek all the way past Bridge

1 Creek Road, right? That was all the Grandad?

2 A. Originally that was -- that's how we -- the
3 plan was written as, it was -- it was included as one
4 fire.

5 Q. And that whole event was given an ICF 209
6 number of 2501, right?

7 A. I don't know. I don't remember what that
8 number was.

9 Q. But it was considered a unitary complex?

10 A. Correct, it would be given a number.

11 Q. And do you know when, if ever, the BLM made a
12 determination to try to segregate sections of the
13 Grandad Fire?

14 A. No, not -- no.

15 Q. It never did, right? It was always the Grandad
16 Fire?

17 A. When we wrote the plan, the plan was written as
18 the Grandad Fire.

19 Q. Right. And that covered from the farthest west
20 of the events that were triggered by lightning on the
21 21st of August to the farthest east?

22 A. Correct.

23 Q. With respect to the area farthest west, were
24 the numbers which you are now, I think, talking in terms
25 of the -- what's now being called the Lower Bridge Creek

1 Fire, did you determine which fences had been burned on
2 the 21st and 22nd?

3 A. We didn't evaluate the fences until after the
4 incident was over and it was safe for the crews to go in
5 and look at that.

6 Q. So you don't know when those fences might have
7 been lost or damaged?

8 A. No.

9 Q. The same would be true about the sagebrush that
10 burned, you don't know when it burned?

11 A. No. I mean, it was part of the -- part of the
12 fire.

13 Q. Right. So at some point after the fire died
14 out, you guys went in there and looked around, right?

15 A. Correct.

16 Q. And it was all after the fact?

17 A. No, no, I'm sorry, no. We had crews -- we had
18 folks out in the fire, resource advisors, and they can
19 partition out at what day in the fire progression, so we
20 knew when pieces of it were burning.

21 Q. So do we know what portions of your numbers
22 here relate to the area that is between the western most
23 part of the fire and, say, two miles to the east?

24 A. I'm not sure where you are talking about on the
25 maps.

1 Q. Well, you are now calling it the Lower Bridge
2 Creek, but it's -- at the time you called it Grandad, so
3 I'm talking about from the farthest west portion of the
4 Grandad Fire, which would be the farthest to the left on
5 the Exhibit 30 you are looking at.

6 A. Okay.

7 Q. Say to the next three miles to the east.

8 A. This way (indicating)?

9 Q. Correct.

10 A. Okay.

11 Q. Did you ever allocate the cost of the
12 replacement of the fences or the seeding?

13 A. There is some numbers that we can pull out
14 that -- let me look at my numbers. The numbers that I
15 gave on fence repair did not include the -- what was
16 identified as a lightning -- the lightning cause on a
17 map.

18 Q. Well, was it the area north of Bridge Creek
19 that was included in your numbers? Because you were
20 pointing at the area north of Bridge Creek when you were
21 talking, although you didn't make the specific
22 references.

23 A. Correct. There was some areas there.

24 Q. That was included in your numbers, right?

25 A. I'm having a hard time going back and forth on

1 the maps figuring out where you are at.

2 Q. Well, if, in fact, you were referring to areas
3 north of Bridge Creek, my question is, are you aware
4 that fire was burning north of Bridge Creek on the night
5 of the 21st of August?

6 A. Correct, yes.

7 Q. Okay. And that was included in your area?

8 A. It was included in the plan, correct.

9 MR. BLACKMAN: That's fine.

10 THE COURT: Redirect.

11 MR. PAPAGNI: I do have some, Your Honor. I'm
12 replacing Ms. Sgarlata temporarily.

13 MR. BLACKMAN: Objection. Are we allowed to
14 switch lawyers?

15 THE COURT: No. We'll stay with the same
16 lawyer for this witness.

17 MR. PAPAGNI: Pardon me?

18 THE COURT: We'll stay with the same lawyer.

19 MR. PAPAGNI: Ms. Sgarlata.

20 REDIRECT EXAMINATION

21 BY MS. SGARLATA:

22 Q. Mr. Rose, directing your attention to
23 Government Exhibit 60 on the screen before you. Can
24 you -- I'd ask if you could increase the size of the
25 area in through here, please. Which --

1 (Discussion held off the record between
2 co-counsel.)

3 BY MS. SGARLATA:

4 Q. Did you -- when you were tabulating the costs
5 attributed to this particular area, did you include in
6 those numbers the area surrounded by the fence -- the
7 fenced portion that is signified by a red and black
8 alternating fence line?

9 A. Is this the one right here?

10 Q. Yes.

11 A. No. The cost did not include that part of the
12 lightning fire area.

13 Q. What does your cost include?

14 A. It includes the seeding that's outside of that.
15 It includes the fence repair. These fences like these
16 here and these here (indicating).

17 (Discussion held off the record between
18 co-counsel.)

19 BY MS. SGARLATA:

20 Q. When do -- do the permittees who are using a
21 particular allotment have to pay for the costs of the
22 fence repairs?

23 A. Excuse me, in this fire we applied for the
24 national office to give us the funding to fix the fences
25 in this area. And we took the responsibility to fix the

1 fences.

2 Q. Is that unusual?

3 A. It's not outside of policy if it's -- if the
4 fences are used to protect seedings or protect areas
5 that are naturally recovering, we will pay to fix those
6 fences.

7 (Discussion held off the record between
8 co-counsel.)

9 BY MS. SGARLATA:

10 Q. In this particular case, did the Hammonds or
11 the permittees make any of those payments?

12 A. I'm not aware of them making any.

13 (Discussion held off the record between
14 co-counsel.)

15 BY MS. SGARLATA:

16 Q. So I'd ask Ms. Root to zoom out on this map and
17 zoom in on the location -- this map does not have the
18 ignitions. Are you familiar with the locations depicted
19 on Government Exhibit 71 on the screen?

20 A. Yes.

21 Q. Were you involved in -- were you involved in
22 any seeding, fencing, or other operational or labor
23 expenditures in the areas of Ignitions 1 through 10 and
24 the Trail Fires after the time of the August,
25 September 2006 Lower Bridge Creek and Grandad Fires?

1 A. There was some fences that we fixed between the
2 perimeter fence here (indicating) and here. So that
3 would be around Ignitions 3 -- I guess Ignition 3. And
4 then there was some -- there is a fence line on the
5 trail fire near the trail fire that we worked on.

6 Q. Why were those fences repaired?

7 A. Well, it's a boundary fence -- the one up by
8 Ignition 3 was a boundary fence between the BLM and
9 Diamond Ranches, I believe it's Otley's. And we
10 repaired that so we could control the livestock
11 movements.

12 Q. What, if any, costs were associated with the
13 costs of the fencing?

14 A. We could calculate it. The cost per mile for
15 fixing the fence is about 30 -- or about \$3,000 and we
16 can calculate the distance in that -- so it's -- it
17 looks about a couple of miles. Looks like it's -- about
18 a mile, say a mile, it would be about \$3,000.

19 Q. And can you use your laser pointer to show what
20 area you are talking about?

21 A. Sure. That would be this area here
22 (indicating).

23 Q. Can you -- I don't know, Ms. Root, can you make
24 out -- zoom in more so we can see the numbers of
25 sections, if that's possible.

1 And I'd ask the witness to -- after Ms. Root
2 has zoomed in, I'd ask the witness to describe some of
3 the sections around which these fences were repaired?

4 A. It looks like section -- between Section 36 and
5 31, and Section 36 and 1.

6 Q. Are you familiar with those particular areas
7 yourself personally?

8 A. No, I didn't -- I don't remember going --
9 visiting those areas.

10 Q. And --

11 (Discussion held off the record between
12 co-counsel.)

13 BY MS. SGARLATA:

14 Q. And, Ms. Root, can you zoom out a little bit
15 more and then can you enlarge this area. Can you -- I
16 don't know if you're able to see some of the additional
17 section numbers that fence repairs bordered like --
18 perhaps we can enlarge in around here. Are you able to
19 see some of the numbers of the sections associated with
20 the locations of the fence repairs?

21 A. Section 10, 6, and 11, were some fence repairs
22 were done. Those would have been evaluated in those
23 areas.

24 Again, section -- again, these -- this boundary
25 fence Section 11 would have been worked on.

1 Q. And the expenditures for those fence repairs
2 were what?

3 A. If you total -- it looks to be about another
4 \$3,000 per mile, so three --

5 Q. Were there any additional expenses that -- were
6 there any additional expenses as a result of the fires
7 in this particular areas?

8 A. I guess -- could you restate that,
9 additional --

10 Q. In addition to -- aside from fences, were there
11 any other expenses?

12 A. On that area, we didn't do any seeding work
13 or -- or I'm -- there is some catchment clean-out work
14 that we did, which is sediment trap, and I don't think
15 we did anything in that area there. Oregon Department
16 of Fish & Wildlife did some work in that area.

17 MS. SGARLATA: Nothing further.

18 MR. SCHROEDER: Just a few questions, Your
19 Honor.

20 RECROSS-EXAMINATION

21 BY MR. SCHROEDER:

22 Q. Could you -- Ms. Root, could you put back
23 Exhibit 71, please. Could you zero in on Sections 10
24 and 11, please.

25 Mr. Rose, you just testified as to that

1 particular fence on Exhibit 71, which is kind of --
2 bisects the Bridge Creek pasture, the Hardie summer
3 allotment. Do you see that red line I'm putting there.

4 A. Correct.

5 Q. And are you saying that the BLM repaired that
6 fence as part of its activities associated with the 2006
7 Grandad Fire?

8 A. I didn't personally inspect that. I don't know
9 if that was -- that was inside what we were calling the
10 fire perimeter. It would have been evaluated to be
11 fixed.

12 Q. Okay. You are not aware of the testimony of
13 Joe Glascock in this case where he said that that was
14 nonfunctional fence, and per a 2005 cooperative
15 agreement, the BLM was to remove that fence?

16 A. I did not know that, no.

17 Q. And so when you were asked on redirect about
18 certain fences, you were just speculating as to
19 particular fences that may or may not have been repaired
20 by the BLM within certain areas; is that your testimony?

21 A. We concentrated on the boundary fences between
22 us and the Otleys in that area to make sure those were
23 solid fences.

24 Q. Okay. In terms of this fence looking at
25 Exhibit 71, of the fence boundary between the Bridge

1 Creek pasture of the Hardie summer allotment and the
2 Otley FFR allotment, at least according to BLM's
3 Exhibit 71, it doesn't indicate any burn associated with
4 lat area in Section 11, does it?

5 A. I -- the red -- if the red is what is being
6 indicated is burned, I don't know how that was
7 evaluated. There was -- the area was burned and it was
8 checked. And anyplace that was broken was fixed.

9 Q. So are you telling us in your cost estimates
10 that there was costs associated with evaluation and
11 repair of fences that were not burned?

12 A. The -- all the perimeter fences were hiked to
13 look to see if they were burned. And then if they were,
14 they were fixed.

15 Q. And so the answer is, yes, in terms of the
16 costs associated with it, that was included in your
17 estimate?

18 A. Correct, yes.

19 MR. SCHROEDER: No further questions.

20 RECROSS-EXAMINATION

21 BY MR. BLACKMAN:

22 Q. I hate to do it, but I do have this one
23 question. If I understand correctly -- because there
24 was testimony earlier in this trial that fence
25 maintenance is an obligation of the permittee. And so

1 is it my understanding that fences in allotments that
2 were assigned to, say, the Hammonds, the BLM could have
3 said, you have to fix it at your cost; isn't that right?
4 That's your obligation as a permittee?

5 A. Could -- I'm sorry, you could you just -- I
6 trailed off. Could you say that again?

7 Q. And I understand. It's been a long morning.
8 But I think Ms. Sgarlata asked you whether or not BLM
9 paid for fence repair in the Mud Creek area.

10 A. Uh-huh.

11 Q. And you said it was within policy and BLM had
12 decided to do it. But, in fact, under the agreement
13 between Hammond Ranches and the BLM, fence repair was
14 the obligation of the permittee, correct?

15 A. The emergency stabilization and rehab policy
16 states that we -- if we, the BLM, decide that it's for
17 protection of seeded areas or areas naturally
18 recovering, the BLM will pay for that fence.

19 Q. I understand that there is a policy that allows
20 it, but the permit between the BLM and the permittee
21 places an obligation on the permittee.

22 A. I don't know about the permit.

23 Q. All right. So if there has been testimony at
24 this trial that the obligation of fence maintenance is
25 with the permittee, then it would be correct, wouldn't

1 it, that the BLM could have said to the Hammonds, you
2 fix the fences in your allotments as your expense?

3 A. We decided on the ESR project to do it because
4 we had the opportunity to.

5 MR. BLACKMAN: No other questions. Sorry, Your
6 Honor.

7 MS. SGARLATA: Nothing further.

8 THE COURT: Thank you. You may step down.

9 All right. Does the government wish to call
10 any other witnesses?

11 MR. PAPAGNI: The one last witness, Your Honor,
12 will be Mr. Gonzalez, and Ms. Sgarlata will handle that.

13 THE COURT: All right. Members of the jury,
14 we're going to take a shorter break than usual. I'm
15 trying to get us to the end of the line here. We'll
16 come back at ten till 1:00. All right? Thank you.

17 (Lunch recess: 12:07 p.m.)

18 (Further proceedings were had by Reporter
19 Amanda LeGore, and are bound under separate cover.)
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1 CERTIFICATE

2 I, Deborah Wilhelm, Certified Shorthand Reporter
3 for the State of Oregon, do hereby certify that I was
4 present at and reported in machine shorthand the oral
5 proceedings had in the above-entitled matter. I hereby
6 certify that the foregoing is a true and correct
7 transcript, to the best of my skill and ability, dated
8 this 20th day of June, 2012.

9
10
11 /s/ Deborah Wilhelm

12 -----
13 Deborah Wilhelm, RPR
14 Certified Shorthand Reporter
15 Certificate No. 00-0363
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